

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT PUBLIC ADVISORY COMMITTEE MEETING

Alexandria, Virginia

Tuesday, August 9, 2022

1 PARTICIPANTS:

2 Opening Remarks:

3 KATHI VIDAL, Under Secretary of Commerce for
4 Intellectual Property and Director of the
USPTO

5 DERRICK BRENT, Deputy Director of the USPTO

6 Patent Public Advisory Committee (PPAC) Members:

7 STEVEN CALTRIDER, Chair

8 TRACY-GENE G. DURKIN, Vice Chair

9 JUDGE SUSAN G. BRADEN (RET.)

10 DAN BROWN

11 JEREMIAH CHAN

12 CHARLES DUAN

13 SUZANNE HARRISON

14 HEIDI NEBEL

15 JEFFREY M. SEARS

16 Union Representatives:

17 CATHERINE FAINT, NTU 254

18 United States Patent and Trademark Office (USPTO):

19 JAMIE HOLCOMBE

20 JERRY MA

21 JONATHAN HORNER

22 VALENCIA MARTIN WALLACE

1 PARTICIPANTS (CONT'D):

2 ANDREW FAILE

3 ROBIN EVANS

4 BOB BARR

5 KATHLEEN DUDA

6

7 * * * * *

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

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

2 (1:00 p.m.)

3 MR. CALTRIDER: Good afternoon and
4 welcome to the August meeting of the PPAC. Just
5 do a quick sound and video check, is everybody
6 able hear me okay? Very good. I'm Steve
7 Caltrider, I'm Chair of the PPAC. Other members
8 of the PPAC, please introduce yourself as we call
9 the meeting to order.

10 MS. DURKIN: Good afternoon, I'm Tracy
11 Durkin, Vice Chair of the PPAC.

12 MR. CHAN: I'm Jeremiah Chan, it's my
13 third year with PPAC.

14 MR. BROWN: I'm Dan Brown, this is my
15 second year at PPAC.

16 MS. NEBEL: I'm Heidi Nebel, this is my
17 first year with PPAC.

18 MR. DUAN: This is Charles Duan, I'm --
19 this is my first year with PPAC.

20 MS. HARRISON: Hi, I'm Susan Harrison,
21 and this is my first year on PPAC.

22 MS. DUDA: Hi, this is Kathy Duda, and

1 I'm the POPA member of PPAC.

2 MS. FAINT: And this is Catherine Faint,
3 I'm Vice President of NTEU 245, and a member of
4 PPAC.

5 MR. SEARS: Hi, this is Jeff Sears,
6 sixth year on PPAC.

7 JUDGE BRADEN: I'm Susan Braden, and I'm
8 on my second year of PPAC, and happy to be here.

9 MR. CALTRIDER: Thank you, I think
10 that's everyone. I would like to remind everyone
11 that we're piloting a new format this year, and
12 rather than the quarterly, nearly day-long
13 meetings, we are trying to cover shorter topics in
14 a deep-dive discussion, a focused agenda with more
15 robust discussion on one or two topics. This is
16 the third meeting with that new format, and we
17 welcome your feedback. As we start to plan for
18 2023 and what the meeting cadence and schedule
19 should be, and the format, we'd love to have your
20 feedback on whether or not this short versions in
21 second and third quarter, versus long, day-long
22 meetings where we cover the full spectrum of

1 business, whether that's an improvement in our
2 format or whether we should go back. So, please
3 share your feedback.

4 Today's agenda includes a deep-dive
5 discussion on artificial intelligence, and the
6 subcommittee on the Council for Inclusive
7 Innovation and the discussion of the office's
8 diversity, equity, inclusion, and accessibility,
9 or work in that subcommittee. These are two
10 topics of great interest to the PPAC and external
11 stakeholders. We'll open today's meeting,
12 however, with comments from Director Vidal. So,
13 Kathi, if you can start with comments and perhaps
14 introduce the USPTO team that's joined us today.

15 MS. VIDAL: That is great. Appreciate
16 being here today, and I will let the team
17 introduce themselves, as I can't see everybody on
18 the video. So, why don't, if you're a team member
19 from USPTO, I see Andy there, why don't you kick
20 it off?

21 MR. FAILE: Good afternoon, everybody.
22 Andrew Faile, Acting Commissioner for Patents. V?

1 MS. MARTIN WALLACE: Thanks, Andy. Hi, I
2 am Valencia Martin-Wallace, Deputy Commissioner
3 for Patents.

4 MR. BARR: HI, I'm Bob Barr. I'm Deputy
5 Commissioner for Patents also.

6 MS. EVANS: Good morning -- good
7 afternoon, I'm Robin Evans, Deputy Commissioner
8 for Patents.

9 MS. VIDAL: That sounds like it may be
10 it for now. I know the Deputy is going to join as
11 well, and we may have a couple other people. So,
12 I will let them introduce themselves as they come
13 on. Steve, thank you for this, thank you PPAC,
14 and thank you everybody who's attending today. I
15 will keep my remarks pretty short so that we can
16 do a deep dive. I will say one of the benefits of
17 having these more frequent meetings is it does
18 give us a chance to dialogue more frequently, and
19 update on you on various goings-on. But again I
20 will keep mine at a high level, and then I will
21 turn things over to the Deputy for comments. So,
22 as you all know the process we've been following

1 within the USPTO is Interim and Final, and really
2 looking for an opportunity to get public comment
3 not only from the PPAC, but also from all
4 stakeholders. So, just to give you a couple quick
5 updates, we are looking for input right now on 101
6 guidance, so that is due by September 15th, so
7 that is out there. We are still working on 101
8 guidance, even though there is now a bill that's
9 been introduced by Senator Tillis. We will work
10 on both of those in parallel, so certainly welcome
11 your input on all of that. We also have a PTAB
12 request for comments on director review, that
13 closes on September 19th, so I wanted you to be
14 aware of that. And then the one thing that we've
15 stood up recently, and perhaps since our last
16 meeting, is an engage the director website. We
17 are going to populate that website soon with email
18 addresses so that if there is a topic you see
19 where we're taking action and you don't see a
20 place to provide specific feedback, you can go to
21 that page to find a place to provide feedback, and
22 or there's -- any other topic you want to engage

1 with me on, you'll have an email to do it. So, I
2 wanted to let you know that's coming.

3 Just a couple other topics that I want
4 to make sure I cover. One is SEP policy. As
5 everybody knows, we have withdrawn the 2019 policy
6 statement. That was not at all a statement in
7 itself, it was not suggest that we don't value SEP
8 patents, that we don't know that SEP standard
9 setting organizations are critical to the U.S.,
10 and we want to make sure we're at the forefront of
11 that. So, our efforts on that will be continuing.
12 We're going to have some roundtable discussions
13 coming up. We certainly entered into an MOU with
14 WIPO related to arbitration. Again, that's not a
15 final resolution on all of this, it's just one
16 measure we're taking to make sure that we support
17 the U.S. when it comes to SEP policy.

18 FDA letter, I know I've gotten a number
19 of comments on that. Where the U.S. sits with
20 regard to pharmaceutical patents, et cetera,
21 really is articulated in that letter, which is,
22 overall we're looking at the entire system to see

1 if we can have more robust and reliable patents,
2 and looking at measures to get there. So, if you
3 look at the initiatives in the letter that I sent
4 to the FDA, we are going to be doing a request for
5 comment on that shortly. We've received PPAC
6 input on that, and should be releasing that I hope
7 by September 1st just to get additional feedback
8 from the public on that.

9 We are also working on an ANPRM, that's
10 an Advanced Notice of Proposed Rulemaking, related
11 to discretionary denials at the PTAB. That is
12 something that we are hoping to release in the
13 next month or two. It's taking a lot of effort,
14 given how complicated the issues are, and
15 certainly we have the 822 comments we already
16 received on that subject matter, and other input
17 we've gotten from stakeholders on that. So, stay
18 tuned for that.

19 Even with that and the interim guidance
20 on FINTIB (phonetic) which we may again be
21 updating shortly, again, it's not the last word,
22 want to go through notice and comment rulemaking

1 on all of this. And when it comes to the PTAB,
2 we're also focused on looking into amendment
3 practice and real parties and interests. So, that
4 will not be part of the first ANPRM, but that will
5 be an additional effort. And then just to let you
6 know, in addition to all the external outreach, so
7 as I think everybody knows, when I came on board
8 that's the first thing we did, we had a lot of
9 stakeholder listening sessions, we heard from
10 individual and ventures across the country, many
11 stakeholders came into the office and did virtual
12 meetings. In addition to that, we now completely
13 launched an internal initiative as well, where
14 we're hearing from people within the USPTO. Just
15 by way of example, last week I had three such
16 hours sessions where I heard from various
17 stakeholders within the USPTO on how we can
18 improve both inside and outside of the USPTO. So,
19 really looking forward to doing that, I know Kathy
20 Duda and I talk, at this point it's been every day
21 this week it seems like, but definitely working
22 with the unions including POPA and NTEU 245 on

1 improvements that we can make that will benefit
2 both stakeholders as well as those within the PTO.
3 So, very excited about all of that. We are going
4 to have a meeting hopefully within Patents this
5 month. We haven't announced it yet but I guess
6 this is the announcement. We'll announce it
7 within Patents, and then hope to make progress as
8 part of that, which we'll report out.

9 So, with that, has the Deputy joined on?

10 MR. BRENT: I am here, I am here.

11 MR. VIDAL: Oh, perfect, then why don't
12 I turn it over to our new Deputy Director?

13 MR. BRENT: Right. My name is Derek
14 Brent and I was sworn in last week as the Deputy
15 Director, and from the bottom of my heart I want
16 to say that I'm honored and privileged to serve
17 with the team here. And when I say team, I don't
18 just mean the great folks here at the USPTO, but
19 also the PPAC. We're all a team together and
20 we're serving something greater. We're serving
21 the mission of the Agency, we're also serving the
22 country. So, I am excited about rolling up the

1 sleeves and getting into the hard work that lies
2 ahead of us.

3 A couple of areas that we will be
4 covering today, they're very exciting areas. Of
5 course looking at AI we'll have a discussion on
6 that. And it's a fascinating and rapidly growing
7 area, but it's not just limited to just a court
8 decision, of course we had an important court
9 decision come down, but there's broader policy
10 implications that we're working hard to -- you
11 know, working hard here at the PTO to certainly
12 look at the area, look at the technology, look at
13 the policy, and make sure that we're staying ahead
14 of it, and make sure that we're leading on this
15 issue.

16 Also an issue that's near and dear to my
17 heart which is Inclusive Innovation, and we'll
18 hear remarks about our work in that area, the
19 committee's work in that area, and again, it's
20 very important, we grow richer when we grow. So,
21 I'm looking forward to hearing about that. With
22 that I will turn it back over to Steve.

1 MS. VIDAL: You're on mute, Steve.

2 MR. CALTRIDER: I'm going to -- I'll
3 start again with my comments, and that is to thank
4 Deputy Director Brent and welcome him to the
5 USPTO, and the PPAC is very excited to work with
6 him and serve to make the patent system better,
7 so, thank you. And Director Vidal, I'd like to
8 also come back to your comments just with a brief
9 thank you as well. The outreach you've expressed
10 and done, the number of comments from not only the
11 PPAC but from the stakeholder community and from
12 the public, has just been outstanding, and thank
13 you, I think it's really better when we have an
14 opportunity to listen to all the stakeholders in
15 the patent system to get all the best ideas on how
16 to improve and move forward, and it's absolutely
17 been terrific in your tenure so far. So, with
18 that, I will ask Judge Braden to -- who is the
19 Chair of the AI IT Subcommittee to introduce
20 today's topic and kick us off on our AI
21 discussion.

22 JUDGE BRADEN: Thank you Steve,

1 Director, and our newest member of the USPTO,
2 welcome, welcome, welcome. We are going to segue
3 a little bit this time from some of the
4 traditional panels that we've had on AI and IT,
5 and we're going to talk -- hear from -- about the
6 summer report of activities that have been taking
7 place, both in Madrid, and we'll have a lot of
8 reports from Oxford, England from our CIO Director
9 Mr. Jamie Holcombe. Mr. Holcombe, are you on the
10 phone now from England?

11 MR. HOLCOMBE: Yes, I am here in sunny
12 old Oxford and ready to give my report. But I
13 can't wait to hear about all the other great
14 progress we've been going on with the patents
15 team.

16 JUDGE BRADEN: We're going to start with
17 Jerry.

18 MR. HOLCOMBE: Yes, why don't we start
19 with Jerry telling us about that great trip to
20 Madrid, Spain?

21 JUDGE BRADEN: Good, Jerry?

22 MR. MA: Sounds great everyone, and

1 thanks for bringing the slideshow up, and also
2 thank you to Dr. Vidal, Deputy Director Brent, and
3 Steve for kicking us off today. And hello to all
4 of our distinguished PPAC members and our guests
5 tuning in today. My name is Jerry Ma and I serve
6 as the Director of Emerging Technology, and
7 co-lead of the AI and Emerging Technology working
8 group here at the USPTO, and I'm absolutely
9 delighted to be able to kick off our August PPAC
10 meeting with a recap of our inaugural public AI
11 research competition.

12 Now, it's probably an understatement to
13 say that we at the PTO are absolutely thrilled
14 about this new channel of engaging the AI research
15 community to solve technical problems that really
16 lie at the heart of our innovation ecosystem. So,
17 this afternoon, I will start off by first
18 describing why we decided to embark on this
19 journey. I'm going to share with you how we went
20 from concept to reality, and finally I will
21 discuss the absolutely expectation-defined results
22 we witnessed, and how (inaudible) efforts.

1 Next slide, please. Many of the latest
2 techniques are (inaudible) IP ecosystem. And if
3 you go to the next slide, you'll see that our
4 answer to this dilemma is really to look toward
5 the public AI research community who possesses,
6 you know, almost limitless reserves of expertise
7 and enthusiasm, and then really bring those
8 reserves to bare on the fascinating technical and
9 business challenges in the IP space. So, that's
10 really what the name of the game is all about, you
11 know, taking the expertise, enthusiasm, and this
12 willpower of all the great researchers and
13 developers out there in the world and exposing
14 them to a fascinating set of problems and
15 challenges that, you know, we encounter day in and
16 day out in IP.

17 Next slide. So, you know, in a
18 nutshell, our goal with this line of initiatives
19 is to enlist the communities that I just described
20 to tackle difficult challenges in artificial
21 intelligence, machine learning, natural language
22 processing, and allied fields, for the benefit of

1 the office and the IP community at large. And the
2 way we're going to go about doing this, at least
3 with this first initiative, is to run a worldwide
4 AI competition based on annotated open data from
5 the agency that we made publicly available for
6 free to anyone in the world, and quantitatively
7 benchmark progress so that we have a good handle
8 on how the community is doing on the problems that
9 we presented.

10 Next slide, please. So, I'll now talk
11 about, you know, the nuts and bolts of how we saw
12 this to fruition, and the way we did so is
13 collaborating with a team at Google and Kaggle on
14 running a worldwide data science competition,
15 which we called the United States Patent Phrase to
16 Phrase Matching Challenge. So, this competition
17 ran from March to June of this year, and it had --
18 you know, of course, one of our objectives was
19 just to see how well this sort of initiative could
20 run in the first place.

21 But we also have the discreet AI
22 research objective, which was broadly to extract

1 semantic meaning from technical language and
2 patent documents with the latest and greatest in
3 AI natural language processing models. As many
4 here now, you know, in patent prosecution, the
5 applicant gets to be their own lexicographer,
6 which presents, you know, both flexibility for the
7 applicant, but also a unique challenge for IP
8 offices who have to contend with a, you know,
9 multitude of diverse language that can ultimately
10 point to similar concepts. So, you know, in
11 layman's terms, you can think of challenge as sort
12 of a how to, you know, solve that sort of reverse
13 induction problem, going from the words and the,
14 you know, technical language in all the patents
15 that we see, back to the underlying sort of
16 semantic meaning and technical concepts that we're
17 ultimately trying to capture.

18 So, the, you know, precise, you know,
19 technical specification of this challenge is
20 probably out of the scope of today's talk, but,
21 you know, this is all available online, so, you
22 know, for those who are eager to see exactly what

1 the parameters of a problem are, just search for
2 U.S. Patent Phrase to Phrase Matching in your
3 favorite search engine, and you'll come across all
4 the detail you need. But, you know, from the
5 business perspective, we saw both (inaudible)
6 submitting, both reporting 2000 unique software
7 source code submissions to the Agency through the
8 automated Kaggle platform, and ultimately, we
9 reached a top performance of almost 88 percent,
10 and an accuracy statistic which we call piercing
11 coordination (phonetic). But this really defied
12 all of our expectations, both in the, you know,
13 engagement we saw with this competition, but also
14 with the final, you know, quantitative result.

15 But, you know, one really interesting
16 trend we saw alongside this competition is, you
17 know, you think that with everyone trying to climb
18 a leaderboard and show, you know, the benefits and
19 the superiority of their approaches, you'd think
20 that people would sort of stay in their own lanes
21 and sort of keep their ideas to themselves, but
22 that's actually not what we saw with this

1 community at all. There was intense competition,
2 but we also saw a remarkable groundswell of
3 collaborative spirit across the world, with over,
4 you know, 1,400 discussion posts in our, you know,
5 competition forum, as well as -- here's something
6 really astonishing, over 1,100 code notebooks that
7 competitors publicly shared with each other and
8 with the community. So, think about, you know,
9 this competition, where people are climbing the
10 leaderboard, trying to get the prize money, and
11 despite that competitive atmosphere, people are
12 still sharing really, really solid codes left and
13 right.

14 So, you know, absolutely phenomenal, not
15 only in the competitive spirit we saw here, but
16 also in the, you know, just international
17 collaboration that we saw, you know, folks from
18 the U.S. team up with folks from Europe, team up
19 with folks from Asia, to really try to
20 collectively take a crack at this problem.

21 Next slide, please.

22 MR. CALTRIDER: Jerry?

1 MR. MA: Yes?

2 MR. CALTRIDER: Would you prefer
3 questions at the end, or do you want us to ask as
4 you go?

5 MR. MA: Questions at the end would be
6 fantastic, and I promise I'm almost (inaudible)

7 MR. CALTRIDER: Sounds great. That
8 sounds great, thank you.

9 MR. MA: Thank you Steve. So, you know,
10 just a quick recap of our post-competition
11 outreach. So, you know, just with this
12 unprecedented level of engagement that we saw, of
13 course, we had to, you know, do something to
14 capitalize on it. So, on June 29th, we
15 inaugurated our AI and Emerging Technology
16 partnership at the Agency. And as part of the
17 opening ceremony for this partnership, we had
18 Director Vidal announce the results of this
19 inaugural competition which was really fantastic
20 to see, that was followed up two weeks later by a
21 USPTO delegation sent to the PatentSemTech
22 conference at SIGIR 2022 Madrid. That's the

1 special ACN (phonetic) special interest group and
2 information retrieval, where we, you know, met our
3 colleagues in person from Google and Kaggle, and
4 presented this groundbreaking work to the AI and
5 NLP patent research community.

6 And then, two weeks after that, we had
7 our global winner calls, where Jamie, our CIO,
8 myself, and other staff from the office of the CIO
9 engaged and debriefed each of the top three
10 contestants who one prize money through this
11 competition. So, you know, we're eager to not
12 only reap the benefits of this individual
13 challenge, but, you know, really build this
14 flywheel and, you know, set up the groundswell for
15 future enthusiasm, future support for other
16 similarly ambitious initiatives.

17 Next slide. So, you know, those are
18 some quick takeaways from our experience here.
19 Number one, there's tremendous untapped potential
20 within the global AI community, from the
21 perspective of us as IP offices, and this talent
22 really comes from everywhere. It comes from

1 universities, it comes from business, both, you
2 know, the large tech companies that we see on the
3 news, as well as startups. It even comes from
4 independent scientists and engineers just working,
5 you know, in their home office, getting a crack at
6 the data and applying their innovation and their
7 new modelling expertise in this sets of
8 challenges. And, you know, how can we at IP
9 offices unlock that talent and bring it to bear on
10 IP?

11 Well, there are four ingredients. We
12 need to provide the community high-quality
13 intuitive (phonetic) data sets that resemble the
14 ones that they're used to encountering as AI
15 researchers. We need to provide them meaningful
16 benchmarks so that they can assess progress on
17 their research. We need to provide a sort of prop
18 environment that fosters both competition, so that
19 we have this competitive dynamic of folks, you
20 know, racing to, you know, achieve better and
21 better results, alongside collaboration that can
22 foster discussion and knowledge-sharing as to

1 folks' new ideas. And finally, we need to tap
2 into folks' intrinsic motivation to really solve
3 problems that have real-world impact.

4 And I think in the IP median (phonetic),
5 we certainly have no deficit of such problems.
6 You know, we have, you know, many AI benchmark,
7 sort of, research benchmarks, I think, like
8 classify cats and dogs, you know, which certainly
9 are cool as technical benchmarks, like, Jerry, you
10 know, we're presenting problems that ultimately
11 bear upon the operation of the innovation
12 ecosystem. So, taking innovation from outside and
13 bringing it to bear to better foster innovation
14 worldwide. So, that concludes this session of the
15 PPAC meeting, and I'd be happy to take questions
16 at this time.

17 JUDGE BRADEN: Steve, I think because
18 we're running a little bit late, why don't we hold
19 until the entire presentation is finished, is that
20 okay with you?

21 MR. CALTRIDER: Yes, yes, that works.

22 JUDGE BRADEN: Okay, great. So, I'd

1 have to ask, Mr. Holcombe, how's your weather over
2 there? We understand England has been under siege
3 here by warming.

4 MR. HOLCOMBE: Yes, unfortunately, it is
5 not its rainy self. In fact, it's almost in a
6 draught, but that works really well for me,
7 because it's sunny and beautiful out. People here
8 are saying it's so hot, but they don't understand
9 how hot Washington D.C. can get in the summer.
10 So, to me, it's a pleasant breeze, and it's
11 beautiful over here.

12 And I will say the biggest surprise was
13 Wales. If folks didn't know, the UK patent and
14 trades office is located in Wales, it's not
15 located in London. And as such, this is the first
16 -- although I've been dozens of times to London,
17 I've never been to Wales, specifically Cardiff,
18 and the people were so warm and friendly, and the
19 UK patent and trade office was just, their
20 hospitality was overwhelming. They have something
21 here called Welsh cakes, which are excellent, like
22 little croissants with raisins, and it's really

1 good.

2 But besides that, the real story is
3 patents and trading, and how we have very similar
4 needs and frustrations with monetization and
5 remote work. We shared a lot of things in
6 similarity about cybersecurity as well. And we
7 plan to take some of these best practices that
8 we've learned and share them in the future. We
9 both share the fact that Log4j was a gaping hole
10 in all of our systems. And because of that, we
11 wanted to make sure that we were helping each
12 other out in any and all cybersecurity
13 vulnerability remediation exercises.

14 Now, the lady over here, her name is
15 Shaniya (phonetic), and she is a fantastic
16 counterpart, and I'm looking forward to working
17 together with her. One of the great things I've
18 found out is, the UK patent and trade office
19 actually finances a police division in London to
20 prevent fraud. And with that, I'm going to take
21 back some of these best practices and figure out
22 if we can do similar practices in the United

1 States. And like you said, because we're lacking
2 for time, I'd like to go on and present the next
3 author (phonetic). So, whoever up next, thank
4 you very much, unless you have any questions.
5 Judge?

6 JUDGE BRADEN: Jamie, I just wanted to
7 have you, just, spend one minute and talk a little
8 bit about your -- the work that you've learned
9 about, search and enforcement capabilities in this
10 particular program that you've been involved with
11 this last week.

12 MR. HOLCOMBE: Yes. So, the search area
13 is very difficult as we all know, and searching
14 for specific fraud with patents is one of the
15 things that Shaniya was also talking about with
16 her crew. She is trying to do a minor
17 transformation with old tools much like we are.
18 But that shouldn't let us stop getting these newer
19 tools in place beforehand. And so, what we're
20 trying to do then is identify and enforce fraud
21 almost before the dangerous results happen. In
22 other words, we'd like to catch the criminals with

1 their hands in the cookie jar. And so, in doing
2 that, I'll have to work more closely with some of
3 our law enforcement brethren in order to affect
4 such a seizure or a stopping of these damages
5 before they occur.

6 JUDGE BRADEN: Thank you, that's very
7 helpful. We're going to move on now to have
8 Jonathan Horner, who is going to give us the very
9 first public demonstration of the More Like This
10 (phonetic) AI search capabilities. Jonathan?

11 MR. HORNER: Thank you, Judge Braden.
12 So, my name is John Horner, I am a Patent Business
13 Analyst in the Office of Information Technology
14 for Patents, and I am very excited and pleased to
15 be here today to present More Like This document,
16 which is the first artificial intelligence tool
17 that is directly integrated into the examiner's
18 search tool, called PE2E search.

19 So, this tool has been directly released
20 into PE2E search for a number of months now, and
21 we have seen a lot of use of it. This tool is
22 designed to assist examiners and give them new

1 documents related to their current search
2 strategy. So, much like you will hear from many
3 people talking about artificial intelligence,
4 artificial intelligence is not here to replace, so
5 we have -- we are giving assistive tools to
6 examiners because we know prior art is increasing
7 at an exponential rate, and we need to support
8 them as they are searching. So, this new tool
9 covers foreign and domestic documents. We update
10 this weekly, and to make sure they always have
11 access to the latest documents, about 64
12 countries' worth of foreign documents besides the
13 U.S. that the model has access to, and will return
14 results based on those models. And the models
15 themselves are updated multiple times per year to
16 make sure that we are always avoiding things like
17 bias and model drift, and be able to always have
18 improvements made to the models, so we're always
19 giving examiners the best tool that we can give
20 them.

21 The actual models themselves are trained
22 from publicly available measures of similarity.

1 What this means is there are -- everything the
2 models are trained from is publicly available,
3 it's public information that everybody has access
4 to, so there is no secret sauce in these models,
5 these models are fully explainable and fully
6 transparent, so that the public and the applicant
7 have an excellent view into exactly what the
8 examiner was doing, and how the examiner was
9 running their search to be able to get to their
10 patentability decision. Results are actually
11 shown in the printout of the search history for
12 recordation purposes, and I will be able to show
13 you that in a moment here when we get to the live
14 demo.

15 So, I am going to go ahead and share my
16 screen, and what you're going to see is a slimmed
17 down version of the examiner's PE2E search. So,
18 you can see over the left here we have our search
19 history, which records for search recordation
20 purposes, and for accountability. We have our
21 search results, which show our results, and then
22 we have a document viewer, which lets the examiner

1 actually read and understand the document.

2 So, you can see I've already run a
3 search here. So, I have selected a U.S. document
4 from 2022, and you can actually see that there is
5 a button up here called More Like This Document.
6 And this is our first artificial intelligence tool
7 that is being put into PE2E search, so we wanted
8 to keep it simple, we wanted to keep it
9 straightforward, but just because it is simple and
10 straightforward from an end user perspective,
11 what's going on under the hood is very
12 complicated, we have a very complicated
13 infrastructure, and the models are very powerful,
14 with many measures of accountability put into
15 them. So, I am able to actually hit this button,
16 and you can see in less than a second I get
17 results, and it says More Like This Document, and
18 it lists the documents that I get results for.
19 So, the examiner in the normal searching fashion,
20 are able to browse through these results, and you
21 can see with this particular result, there is
22 actually a Japanese document. You can see that

1 this Japanese document is published -- is
2 translated into English. You can see the original
3 document here, in Japanese. But we have all of
4 these translated for the examiners, because most
5 examiners are primary English speakers, and
6 therefore we want them to be able to understand
7 the document. But the examiner is able to easily
8 browse for the documents using their normal search
9 techniques, and even, if they want to, perform
10 further More Like This Document actions on that.
11 So, you can see once again I hit the button, and
12 in less than a second I get another result. So,
13 you can see in the search history that there is
14 not much information here on the results.
15 However, if you look at the actual printout of the
16 search history, which I have an example here, you
17 can actually see that we have the actual search
18 queries, and then we specifically note when
19 artificial intelligence is used so that it's clear
20 to the public and clear to the applicant. We list
21 the document, and then we list all the results
22 from the search, so that there is full clarity as

1 to what the examiner did, and how the examiner
2 went about their search strategy. And with that,
3 it is a short but simple demo, but it is very
4 powerful demo, and we are very excited to have
5 examiners using these and citing references based
6 off of this tool. And with that, I'd be happy to
7 take any questions, but other than that, I will
8 return everything to you, Judge Braden.

9 JUDGE BRADEN: I think this is just an
10 amazing demonstration you've had so that we can
11 see how much your office has done to help
12 examiners search and wind up with really patents
13 of durability and quality. I'm just curious, how
14 many years did it take for you to put this whole
15 program together?

16 MR. HORNER: We did start out with a
17 prototype, because, as our CIO has mentioned many
18 times, fail fast. We have found a number of
19 successes through that prototype and we built upon
20 those successes, so it was only a couple years in
21 development. We know the models themselves have
22 been developed over many years, so we are taking

1 advantage of an outside model provider who was
2 able to provide us with models that have many
3 years of research put into them.

4 JUDGE BRADEN: Well, it was nothing
5 short of impressive, all I can say is great.
6 Steve, you wanted to ask some questions earlier?

7 MR. CALTRIDER: I have several questions
8 now, so I may go in reverse order.

9 JUDGE BRADEN: That's what I thought.

10 MR. CALTRIDER: And I'll echo a bit what
11 Judge Braden just shared in terms of the
12 importance of this. One of the ways to a reliable
13 and durable patent right is making sure the best
14 prior art, or the closest prior art, is before the
15 examiner so they can do the very best quality
16 examination possible. And one of my questions,
17 Jonathan -- while you have the floor, then I'll go
18 back to Jerry -- is how do you measure success?
19 How do you know that you're finding art that
20 either wouldn't have been found, or you're finding
21 art more efficiently so the examiner can do their
22 job better? How do you measure success in this?

1 MR. HORNER: That is an excellent
2 question. We use both qualitative and
3 quantitative measures. We have measures, direct
4 feedback from the examiners where we give them
5 things like we let them give feedback directly to
6 us. But then we also are measuring from the
7 backend, how examiners are using the tool. So,
8 our examiner is citing documents that appear in
9 the office action, where are those documents
10 sourced from, are they sourced from More Like
11 This, are they sourced from their normal searches,
12 so we do track and measure both, you know,
13 examiner feedback and how they feel about the
14 tool, and then the actual measures of, are they
15 using documents in their office actions?

16 MR. CALTRIDER: Very brief follow-up and
17 I'll turn to one of my colleagues, Dan Brown has a
18 question as well. At what point will you be able
19 to report out those data on those measures?

20 MR. HORNER: I do not have an answer for
21 that right now, but we will definitely -- I will
22 talk to my leadership and get back to you.

1 MR. CALTRIDER: Great, great. Dan, you
2 also had a question?

3 MR. BROWN: I'll make it quick in time,
4 but I'm interested in the process of the searches
5 and search engines would be better matching with,
6 you know, looking at different classes of patents
7 that were identified in the patent. This is, I
8 believe, we're using the sort of better matching
9 of languages in this process, is that correct?

10 MR. HORNER: Yes, so, everything is done
11 based off of translated documents, both foreign
12 and domestic. So, we look at the application
13 text, we turn that into vectors and things like
14 that, and then we compare, we do mathematical
15 comparisons on the backend. You know, this is
16 where the models come in, and we do this over the
17 100 million plus documents that are part of our
18 current corpus of documents, and then we find the
19 top documents that are similar.

20 MR. BROWN: Well, my question as a
21 challenge on that is, how do you account for the
22 difference in meaning from -- used differently in

1 cultures as well, even within a language?

2 MR. HORNER: So, that is a very good
3 question. We are working towards doing things in
4 the original language of the actual patent
5 document, so we are working towards that using
6 translation models and things like that. But at
7 this point, we are relying on the English version,
8 so there could be issues, we know that those
9 issues are there, but we do have metrics
10 associated with the models that show how accurate
11 and how successful they are. So, we rely on those
12 measures, and then the feedback from examiners to
13 be able to judge, are these models actually being
14 successful, are we actually getting similar
15 results? We also plan on building direct feedback
16 mechanisms for examiners to give us direct thumbs
17 up, thumbs down type feedback, so that, you know,
18 the examiners can actually tell us, hey, this was
19 a bad translation, this, you know, the content in
20 here does not match the content of my document for
21 X, Y, and Z reason, because when it comes down to
22 it, the examiners are the experts, they are the

1 ones assessing the patentability of the document,
2 and they are the ones who understand the documents
3 most fully.

4 MR. BROWN: That sounds great. And then
5 I have one last question, are you comparing these
6 results to the old system of this better matching
7 on classes, and have you been able to see a
8 difference or improvement?

9 MR. HORNER: We have not seen any
10 specific improvements, or we have not measured, I
11 should say, any specific improvements. That is
12 something that we are targeting for the future,
13 and future I don't mean next year, I mean within
14 the next couple months. We are doing a heavy data
15 dive into the data that we have already collected
16 to be able to start to report out those sorts of
17 metrics.

18 MR. BROWN: Great, one (inaudible)
19 patent it's always my question, is this going to
20 be available to the public?

21 MR. HORNER: We are looking into it, but
22 I do not have any more information on that topic

1 at the time.

2 MR. BROWN: Great, thank you.

3 MR. HORNER: Absolutely.

4 SPEAKER: If we have time for one more
5 question, I'm curious whether there's any image
6 component of this, and whether there's any
7 applicability at some point to design patent
8 searching.

9 MR. HORNER: There is. We specifically
10 only target text with these current models. We do
11 have models coming down the line that rely on
12 images, so we are looking at supporting our design
13 examiners, and our mechanical examiners, and other
14 image searchers, to the best of our ability using
15 future technologies that are coming within the
16 next year or so.

17 JUDGE BRADEN: That -- everyone who
18 participated into today's presentations, thank
19 you, thank you. And Steve, I think I'll turn the
20 program today back to you, unless there are other
21 questions. We've got more people that want to
22 share what they've been doing.

1 MR. CALTRIDER: No, I don't know if
2 we've seen some other questions, we may need to
3 follow up on those questions offline for the sake
4 of time so we get our second agenda item, but
5 thank you, that was very, very informative, and I
6 know I still have a couple more questions that
7 I'll also provide offline as well. So, we will
8 follow up and report out with the questions that
9 we've received in the chat, from the public
10 (inaudible). Thank you. Okay, let's move now to
11 the next agenda topic, the Council for Inclusive
12 Innovation and Diversity Equity Inclusion
13 Accessibility subcommittee. I won't make any
14 additional opening comments, other than to say
15 that this is another very important topic, and I
16 want to have as much time as possible for
17 discussions. Dan, I believe as chair you were
18 going to lead the discussion, is that correct?

19 MR. BROWN: Yep, I'm prepared. Valencia
20 is going to carry the water. But I just wanted to
21 introduce myself again, Dan Brown, I'm the chair,
22 and working with Susanna Harrison, vice chair.

1 We're probably, I think, the members that have
2 been really the most engaged with the new
3 directions efforts, primarily because I've spent a
4 lot of time, and Susanne has also, in working with
5 and reaching out to the inventor stakeholders, and
6 I guess to make a long story short, wish I could
7 here, is that I'm very honored to have been
8 involved in this, and I see an empathy for the
9 small inventor community, and our particular needs
10 is at the forefront, and really was a big part of,
11 I think, directions post efforts, and getting our
12 feet on the ground about this, and so what has
13 been a number of listening sessions, and we work
14 very hard to reach out to get to many different
15 stakeholders involved in it, and there's a lot of
16 feedback that the office is in the midst of
17 processing right now, and I'm looking forward to
18 real (inaudible), real efforts in proving our
19 circumstances in the plight of the small inventor
20 community.

21 With that, with the innovation expansion
22 committee was what we started with, but this is

1 what I'm working into (phonetic) from new efforts,
2 take to this committee in more focused areas, and
3 today we're going to talk about the CI2, but also
4 there's the efforts that we've worked on in
5 primary broadening, expansion of innovation, the
6 diversity equity inclusion, and obviously the CI2
7 initiative. Today, Valencia will be speaking on
8 what's happening with CI2, but I just, suffice it
9 to say, there's a lot of efforts going on, and
10 rather than moving, I think we're bringing more
11 focus in this particular area. And then I finally
12 want to thank you Director for engaging me in this
13 process, I feel like we're off under a very strong
14 pathway to improving the inventors of the day
15 (phonetic). Valencia?

16 MS. MARTIN WALLACE: Okay, thanks Dan.
17 Can we have my slides come up? Great, thank you.
18 So, thank you Dan for those words and all of the
19 support that we've received. It makes a huge
20 difference. So, today I am very excited to talk
21 to you about the progress we've made and give you
22 some updates on inclusive innovation here at the

1 USPTO, and I will start with talking about updates
2 for the Council for Inclusive Innovation, and if
3 we go to the next slide I think -- I'm sorry, go
4 back one, you're -- yes.

5 So, just to give you a reminder that the
6 Council for Inclusive Innovation, which Secretary
7 of Commerce Gina Raimondo and USPTO Director
8 Vidal, chair and vice chair respectively, we are
9 working to unlock the potential of every American,
10 especially to tap into the communities
11 traditionally underrepresented in an innovation
12 ecosystem. And while we are still working on the
13 national strategy for expanding innovation,
14 Director Vidal recently announced a number of
15 initiatives inspired by the work the USPTO is
16 doing, along with the Council and the working
17 group members, in developing the strategy.

18 Go to the next slide. At the end of
19 July, Director Vidal published a blog providing
20 updates on the work of CI2, and here is the photos
21 that went with that blog. We had been hard at
22 work on new initiatives bolstering participation

1 in innovation, including invention,
2 entrepreneurship, and creativity. In the blog,
3 Director Vidal launched a first set of initiatives
4 to encourage, empower, and support innovators of
5 tomorrow. And the initiatives I am discussing
6 today with you are just a few of the initiatives.
7 We will be launching more initiatives as part of
8 the CI2 mission, and we are looking forward to the
9 time when we will be able to announce those as
10 well.

11 But for now, okay go to the next slide
12 and I can start talking about some of these. The
13 first being our innovation internship, which I'm
14 really proud to say we put out a vacancy
15 announcement out for, so the initiative is newly
16 established paid innovation internships at our
17 agency that will allow hands-on job training to
18 community college and university students. And
19 the internship was designed to target the gaps in
20 inequalities associated with students from
21 underrepresented and underserved communities,
22 allowing access to compete for paid internships in

1 their respective fields of study. It will be a
2 remote work program allowing students who are
3 unable to move near a regional office to still be
4 able to participate in this program. It's
5 designed to provide the real-world experience not
6 only in patents and in trademarks, but across all
7 of IP and the innovation arena.

8 And I'm very excited to say that the
9 vacancy announcement posted on USAJOBS a little
10 over a week ago, and since then has closed because
11 we had, within the first week, 542 applicants. We
12 are now in the selection process, and we are
13 expecting to onboard the first cohort of interns
14 this fall, and I think, you know, that that number
15 in just a week validates why these paid internship
16 programs across all of innovation are very needed.

17 We can move on to the next slide. I'll
18 talk about a first-time filer expedited
19 examination petition, and USPTO receives about
20 40,000 patent applications each year, that means
21 at least 1 inventor who is a first-time filer.
22 For first-time micro-entity filer speeding up the

1 time to secure a patent can accelerate their
2 ability to bring their ideas to impact, to begin
3 companies, to secure investment, and create jobs.
4 So, we are here to support their journeys.

5 Director Vidal announced this new
6 fast-track program that will provide expedited
7 examination and early indication of patentability
8 for first-time micro-entity filers. This program
9 will include additional support for filers such as
10 and including a basic patent training as a
11 prerequisite to participation in the program.

12 Please look out for our federal register notice on
13 this program that will be coming out soon. We
14 will expect it to launch in early fall, and it's
15 just added to let you know that this program is
16 open to any filer meeting the requirements, even
17 those who have already been put into the system,
18 will be qualified to participate. And this
19 program supplements the USPTO's other expedited
20 examination programs, which include supporting
21 COVID, cancer immunotherapy, and green technology,
22 and I encourage everyone to go on to our website

1 and take a look at the different expedited
2 petitions that we have, and get more information
3 about them.

4 And if we can move on to the next slide.
5 Next is our free legal services, and by expanding
6 access to free legal services, we are assisting
7 more under-resourced innovators, and protecting
8 their ideas, and bringing them to market. The
9 USPTO is expanding both its law school clinic
10 certification programs, as well as its support of
11 regional patent pro bono programs. And expanding
12 our program to more law schools and students means
13 increasing opportunities for more innovators to
14 receive that important pro bono services, helping
15 them bring their ideas to reality.

16 And we're very excited to welcome four
17 new law schools into the program. We now also
18 have George Mason University, Case Western
19 University, Wake Forest University, and Brigham
20 Young University as part of our law school
21 certification programs. We also support 21 pro
22 bono regions across the country as part of the

1 USPTO's patent pro bono program, and we're working
2 with participating regional patent pro bono
3 programs on plans to expand their work, including
4 infusing more funding into their programs to help
5 even more innovators. And by expanding pro bono
6 practitioners, we support more Americans,
7 including more veterans, and those having a lower
8 socioeconomic status, those outside of our
9 technology hubs, and those who traditionally just
10 have not had the access to this innovation
11 ecosystem.

12 And we are very encouraged by our latest
13 statistics where we see approximately 13 percent
14 of named inventors on U.S. patent being women. We
15 see in this pro bono program 41 percent of
16 applications are women. This based on the survey
17 in our 2021 that we've done, identifying these
18 women, as well as seeing in addition 30 percent
19 identified as African- American, 14 percent as
20 Hispanic, 5.6 percent as Asian- American or
21 Pacific Islander, and 1.5 percent as Native
22 American, showing that the innovators are out

1 there and we have to reach them.

2 Go to the next slide. So, our next,
3 community outreach. The USPTO employees
4 delivering community-based education and awareness
5 programs, educating their local communities across
6 the country on the importance of IP and
7 innovation. We are affectionately referring to
8 this program as our IP champions, working across
9 the country, leveraging a diverse and widespread
10 workforce across the United States that have them
11 going into their local communities. We are
12 working with local community organizations with
13 programs at the K through 12 levels to begin this
14 program, and we are looking that later in this
15 calendar year we will be standing that program up
16 as well.

17 If we go to the next slide. I know I
18 only have a few minutes left, so I'll try and go a
19 little quicker. So, I'd like to talk about some
20 of the initiatives outside of CI2 that the USPTO
21 is also participating in. First, I want to just
22 say how excited we are about the inclusive

1 innovation page that has been created. And I
2 really -- I would recommend that everyone go on
3 and see where the office has this wealth of
4 resources and information for inventors and
5 entrepreneurs on this website, where they can go
6 to find information on how to start with any IP
7 system, how to apply for patents and trademarks,
8 and how to get help, and much, much more.

9 Go on to the next. And today, we have
10 an Office of Education program for young
11 inventors, creators, and aspiring entrepreneurs.
12 It is on our headquarters in Alexandria, one to
13 four o'clock today. We have attendees
14 participating online, and it is including
15 inspiring students to code, interactive workshops,
16 K-12 resources, young inventor roundtable that our
17 Deputy Director Brent will be participating in,
18 and we're looking forward to being able to give
19 more information about how well that program went
20 today.

21 Go on to the next slide. So, we're also
22 having our invention count, so the Office of

1 Innovation outreach is hosting this Wednesday
2 through Friday, 10 through 12, just to talk about
3 a few of the agenda items for this three-day
4 program. It's learning about advantages of
5 protecting your IP, it's about learning about
6 USPTO's pro bono program, conducting prior art
7 searches, and filing trademarks with provisional
8 patent applications, how small business owners are
9 partnering with USPTO to ensure long-term success,
10 how to pitch business ideas to potential
11 inventors, how to obtain access to capital and
12 other financial assistance, how to combat piracy
13 and counterfeits, and much, much more. Very
14 exciting three-day program, it's always been very
15 successful. It is virtual, so we can have anyone
16 across the nation, whether they can get on
17 headquarters or not, be able to participate.

18 Okay, go on to the next. So, we also
19 have a USPTO symposium that's happening August 26,
20 the Chief Economist at the USPTO, Andy Toole, is
21 hosting this. It is on advancing research on
22 inventor demographics. It will focus on the

1 current research on inventor demographics from a
2 number of leading scholars in the field, and
3 looking to identify a community of practitioners
4 building on common approaches in the area of
5 inventor demographics. This, once again, will be
6 virtual, and you can go on to our webpage and sign
7 up to participate in the symposium as well.

8 We can move on to the next. We have
9 some information on recent study from the Office
10 of the Chief Economist, closing the gender gap,
11 which goes on to speak on the use of a Pro Se Art
12 Unit and the Pro Se Assistance Center, and how
13 beneficial it is to have these programs, reaching
14 out, working with pro se inventors and applicants,
15 in order to promote, train, educate, and have them
16 successfully moving through the patent system.

17 Then we can go on to the next, you can
18 go over to one more. Now, I've gone through a lot
19 of programs today, a lot of resources, so here is
20 the page for everyone to go on to be able to go
21 directly to some of the resources, some of the
22 information that I've discussed with you today.

1 If you would like to learn more about all that
2 we're doing, if you would like to learn more about
3 how to partner with us and work on this effort.

4 So, I will go on to the next, because I
5 think we're just at two o'clock, so apologize for
6 not being able to go a little bit quicker, but
7 happy to take any questions, or if any questions
8 come up after this, happy to follow up.

9 MR. BROWN: Because of time, I don't see
10 a lot of questions here, just a couple good jobs,
11 I feel grateful that you've really presented a lot
12 of stuff there. So, I'll be sure if any questions
13 come up -- anytime, anybody can reach out to any
14 member of the PPAC or myself, if it's something
15 related, or me particularly (inaudible) small
16 inventors. Few things I'd like to say on the
17 other (inaudible) this education for its new
18 programs, (inaudible) particularly at the
19 universities, and then finally looking at the life
20 of, the durability and the reliability and the
21 (inaudible) of an event that's having all this is
22 dependent on the thought that we raise the level

1 of certainty that, once a patent is issued to an
2 inventor, that they have the ability to protect it
3 and move forward in the market as the (inaudible).
4 So, thank you Valencia, and I am looking forward
5 to taking all of these programs to the next level,
6 so, I appreciate it.

7 MR. CALTRIDER: Thank you, Dan. Thank
8 you, Valencia. That was a great presentation.
9 Note to myself that we'll make sure we allocate a
10 bit more time when we revisit the issues, because
11 I had a few questions that we'll just need to take
12 up next time. We've reached the end of our hour,
13 I want to thank the PPAC, and thanks everyone, the
14 office and staff, everyone who joined us today,
15 and I look forward to seeing you next month.

16 JUDGE BRADEN: Thank you all.

17 MR. CALTRIDER: Thanks, everyone.

18 (Whereupon, at 2:02 p.m., the
19 PROCEEDINGS were adjourned.)

20 * * * * *

21

22

1 CERTIFICATE OF NOTARY PUBLIC

2 COMMONWEALTH OF VIRGINIA

3 I, Mark Mahoney, notary public in and for
4 the Commonwealth of Virginia, do hereby certify
5 that the forgoing PROCEEDING was duly recorded and
6 thereafter reduced to print under my direction;
7 that the witnesses were sworn to tell the truth
8 under penalty of perjury; that said transcript is a
9 true record of the testimony given by witnesses;
10 that I am neither counsel for, related to, nor
11 employed by any of the parties to the action in
12 which this proceeding was called; and, furthermore,
13 that I am not a relative or employee of any
14 attorney or counsel employed by the parties hereto,
15 nor financially or otherwise interested in the
16 outcome of this action.

17

18 (Signature and Seal on File)

19 Notary Public, in and for the Commonwealth of
20 Virginia

21 My Commission Expires: August 31, 2025

22 Notary Public Number 122985

