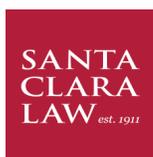


Patent Quality Conference

Advancing Patent Quality Across the IP Community



Sponsored by: US Patent and Trademark Office, Duke Law Center for Innovation Policy, and the Santa Clara High Technology Law Institute

UNITED STATES
PATENT AND TRADEMARK OFFICE



Patent Quality Conference

Tuesday, December 13, 2016
8:30 am – 5:00 pm | Madison Auditorium

AGENDA

8:00 – 8:30 Check-in/Reception

Opening Remarks:

8:30 – 8:55 Welcome

Valencia Martin Wallace
Deputy Commissioner for Patent Quality, USPTO

Advancing Quality in the IP Community

Michelle K. Lee
Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

Enhanced Patent Quality Initiative Program Results

8:55 – 10:50 Presentations:

I. **Clarity of the Record Pilot Results**

Robin Evans, *Director, Technology Center 2800, USPTO*

II. **Improving Clarity and Reasoning in Office Actions (ICR) Training/Stakeholder Training on Examination Practice and Procedure (STEPP)/Automated Pre-examination Search**

Greg Vidovich, *Associate Commissioner for Patent Quality, USPTO*

III. **Master Review Form and Quality Metrics Results**

Martin Rater, *Acting Director, Office of Patent Quality Assurance, USPTO*

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IV. **Topic Submission for Case Studies Results**

Brian Hanlon, *Director, Office of Patent Legal Administration, USPTO*

10:50 - 11:50 Panel Discussion: Patent Quality in the USPTO - Our next steps!

Moderator:

Jack Harvey, Assistant Deputy Commissioner for Patent Operations, USPTO

Panelists:

Valencia Martin Wallace, Deputy Commissioner for Patent Quality, USPTO

Andrew Faile, Deputy Commissioner for Patent Operations, USPTO

Robert Bahr, Deputy Commissioner for Patent Examination Policy, USPTO

Kevin Rhodes, President and Chief IP Counsel, 3M Innovative Properties Company

Hans Sauer, Deputy General Counsel, Biotechnology Innovation Organization

11:50 - 1:15 Lunch**12:15 - 1:15 Ethics Presentation: Professional Responsibility and Practice Before the USPTO**

William Covey, Deputy General Counsel, Office of Enrollment and Discipline, USPTO

Post Grant Activity**1:15 - 1:50 Presentations:****I. Patent Quality and Post Grant Activities**

Russell Slifer, Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the United States Patent and Trademark Office

II. Effect of Patent Quality in U.S. Courts

Hon. Raymond Chen, Judge, United States Court of Appeals for the Federal Circuit

1:50 - 2:45 Panel Discussion: Patent Quality and Its Impact in the U.S. Courts

Moderator:

Charles Molster, The Law Offices of Charles B. Molster, PLLC

Panelists:

Hon. Raymond Chen, Judge, United States Court of Appeals for the Federal Circuit

Hon. S. Jay Plager, Judge, United States Court of Appeals for the Federal Circuit

Hon. Paul Michel (ret.), Chief Judge, United States Court of Appeals for the Federal Circuit

Paul Grewal, Vice President and Deputy General Counsel for Worldwide Litigation, Facebook; Magistrate Judge (ret.), United States District Court for the Northern District of California

————— **BREAK** —————

International and Stakeholder Cooperation

2:50 - 4:45 Panel Discussions:

I. International Quality Efforts

Moderator:

Professor Colleen Chien, Santa Clara Law

Panelists:

*Dr. Stuart Graham, Associate Professor, Scheller College of Business,
Georgia Institute of Technology*

Mark Powell, Deputy Commissioner for International Patent Cooperation, USPTO

Roger Gobrogge, IP Counsel, ITIP ProFiciency, LLC

*Alfred Spigarelli, Principal Director of Quality Management,
European Patent Office*

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II. What can Applicants do to Enhance Patent Quality?

Moderator:

Professor Arti Rai, Elvin R. Latty Professor of Law, Duke Law School

Panelists:

*Russell Slifer, Deputy Under Secretary of Commerce for Intellectual Property and
Deputy Director of the United States Patent and Trademark Office*

Mark Vallone, Lead IP Counsel, IBM

Robert Armitage, Consultant, IP Strategy & Policy

Vera Ranieri, Attorney, Electronic Frontier Foundation

*Saurabh Vishnubhakat, Associate Professor of Law and Engineering,
Texas A&M University*

Closing Remarks

4:45 - 5:00 Next Steps of Enhancing Patent Quality/Closing Remarks

Andrew Hirshfeld, Commissioner for Patents, USPTO

Enhanced Patent Quality Initiative (EPQI)

Program Results

<http://www.uspto.gov/patentquality>

To ensure that the USPTO continues to issue high-quality patents, the Office launched the Enhanced Patent Quality Initiative (EPQI) in February 2015 with a Federal Register notice that set out a number of proposals under three pillars of patent quality:

1. Excellence in work products, namely providing the best work products and services at every stage of the patent process.
2. Excellence in measuring patent quality, namely ensuring appropriate quality metrics to target examination issues requiring attention.
3. Excellence in customer service, namely improving the customer experience.

This Federal Register notice also invited the public to attend a Patent Quality Summit (held in March of 2015) or to submit written comments on the proposals.

Based upon feedback from the public, the USPTO ultimately developed twelve programs that focused on various aspects of the entire patent application process, including the enhancement of the USPTO's prior art search capabilities, development of additional application prosecution options for patent applicants, and expansion of patent examiner training. These programs are currently at various stages of implementation, and some have already matured into permanent programs. Each of the EPQI's programs has a summary in this booklet to provide you with additional information, including the program's objective, background, and current results.

Another important aspect of the EPQI has been the Office's efforts to collaborate with all members of the stakeholder community to identify ways the Office can improve patent quality. In addition to the Patent Quality Summit in March 2015, the Office hosted a Patent Quality Community Symposium in April 2016 to update the public on the status of our patent quality programs, to introduce some developing programs, and to collect feedback. The USPTO also routinely hosts events, both in-person and virtually, designed to provide information on patent quality topics and gather feedback. Today's Patent Quality Conference continues this on-going conversation about patent quality, and we invite you to share your thoughts either in person or via email at PatentQuality@uspto.gov.

EPQI Programs

Pillar 1 - Excellence in Work Products:

- Automated Pre-Examination Search Pilot 5
- Clarity of the Record Pilot 5
- Clarity of the Record Training: Improving Clarity and Reasoning in Office Action Training (ICR Training) 8
- Post Grant Outcomes 9
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Pillar 2 - Excellence in Measuring Patent Quality:

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- Quality Metrics 15

Pillar 3 - Excellence in Customer Service:

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- Interview Specialist 17
- Post-Prosecution Pilot (P3) 17
- Reevaluate Quick Path Information Disclosure Statement (QPIDS) 19



Pillar 1 - Excellence in Work Products

Automated Pre-Examination Search

Executive Leads: Tom Beach, Chief Data Strategist & Portfolio Manager of Digital Services & Big Data

Greg Vidovich, Associate Commissioner for Patent Quality

Objectives

The Automated Pre-Examination Search program was created to make a pre-examination search available automatically in every application to supplement the search performed by the examiner.

Background

In March 2015, the USPTO started pursuing a technological solution for preliminary prior art searching. While examiners have various search systems at their disposal, such as EAST (Examiner Automated Search Tool) and various non-patent literature databases, none of these systems automatically provide the examiner with search results prior to the start of the examiner's own search.

Results

The Office started by conducting market research to determine whether any companies had the capability to find prior art references that examiners would consider relevant in an application. Based on favorable results from the market research phase, the Office entered into

procurement activities. In July 2016, the Office awarded a contract to AI Patents with work beginning in late September. The technology is in active development at this time and is expected to be capable of demonstrating results in late December. To date, 931 published patent applications that had been abandoned in fiscal year 2016 were used to test the system. References cited by patent examiners during prosecution in these applications were used for evaluating search capability. Initial data suggests that the developing search tool found at least one reference cited by the examiner in approximately 33% of the above applications.

Lessons Learned/Moving Forward

The Office continues to evaluate the data, while further defining the metrics of success, as well as the capabilities and limits of AI Patents' proprietary technology, and the Office looks forward to launching a pilot in 2017 to more objectively evaluate automated search effectiveness overall.

Clarity of the Record Pilot

Website: <https://www.uspto.gov/patent/initiatives/clarity-record-pilot>

Executive Lead: Robin Evans, Director, Technology Center 2800

Objectives

The Clarity of the Record Pilot was to identify best examiner practices for enhancing the clarity of various aspects of the prosecution record, particularly with

respect to claim interpretation, reasons for allowance, and interview summaries, and to study the impact on the examination process of implementing these best practices.

Background

The Clarity of the Record Pilot ran from March 6th to August 20th of this year. To ensure a diverse pool of examiners, the Office invited randomly-selected utility patent examiners with at least two years of patent examining experience to participate. In all, 125 examiners representing all utility Technology Centers participated, and roughly two-thirds of these participants were primary examiners.

The pilot kicked off with four different training modules – an initial module to provide participants with an overview of the pilot and three modules to provide identified best practices to enhance clarity with respect to the pilot’s three focus areas (i.e., claim interpretation, reasons for allowance, and interview summaries). All of the modules started with a discussion about the goals of the pilot and the importance of clarity.

Pilot participants were expected to use these, and other identified best practices when drafting Office actions for a select number of cases. In addition, throughout the pilot, participants attended quality enhancement meetings to discuss interesting takeaways with fellow pilot participants. The quality enhancement meetings were typically held with examiners working within similar technologies; however, there were also pilot-wide meetings involving invited speakers, including a judge from the Patent Trial and Appeal Board and the Commissioner for Patents, who shared their perspective on the importance of clarifying the prosecution record. Participants also met biweekly with a pilot manager to receive one-on-one training and to consult on lessons learned.

Results

To evaluate the pilot, the Office reviewed the clarity of approximately 2,600 cases using a modified version of the Master Review Form (MRF) that assessed 68 unique drivers of clarity. The Office used the gathered data to conduct a statistical assessment of whether the best practices of the pilot improved the clarity of Office actions. In addition, the Office analyzed feedback from the quality enhancement meetings and training sessions,

including a list of best practices developed by the pilot participants (set forth below). Based on this information, the Office identified the best practices that were key drivers of overall clarity, which included:

- For interview summaries, providing (i) the substance of the examiner’s position, (ii) details of any agreement reached, and (iii) a description of the next steps that will follow the interview;
- For reasons for allowance, (i) addressing each independent claim separately, (ii) particularly identifying the applicant’s persuasive arguments (wherever they may be in the record), and (iii) identifying allowable subject matter of the claim rather than merely reciting the entire claim as the basis for allowance; and
- For claim interpretation, (i) putting all 35 USC 112(f) presumptions on the record, (ii) explaining how the presumptions were overcome, (iii) identifying on the record the structure in the specification that performs the function, and (iv) when a prior reference is used to reject multiple claims, clearly addressing specific limitations in each claim that are anticipated by the art.

The Office is still in the process of analyzing the data to determine how best to implement the pilot’s best practices across the patent examining corps and to use the data as part of the Office’s examination time analysis.

Best Practices

During focus sessions and other meetings, pilot participants developed a list of best practices for enhancing the clarity of the prosecution record. These best practices have been grouped by the pilot’s focus areas, as follows:

1. Claims Interpretation / Rejections

- In general, assume that the audience is not as knowledgeable about the subject matter as you are. Do not leave the applicant to guess what your position is for any claim feature, as this invites arguments and prolongs prosecution.
- Indicate not only where in the prior art the limitation is taught, but also summarize why that limitation is met.

- If terminology in the prior art reference is different than that in the claims under examination, include the prior art terminology in your rejection, e.g. in square brackets.
- When applying prior art rejections to a claim rejected under 35 USC 112(b), make the broadest reasonable interpretation and state on the record how you interpreted the limitation at issue.
- Discuss rationale to combine for each and every reference cited in a 35 USC 103 rejection. Specifically, if you have a 35 USC 103 rejection in view of X in view of Y in further view of Z, then discuss the combination of X and Y and then discuss why it would be obvious to combine the teachings of XY with Z.
- Use SnagIt tool to include pertinent figures or chemical formulas in the office action. Use the tool to annotate the images to more clearly convey your position.
- State on the record how much patentable weight is given to the preamble, when applicable.
- Do not “lump” claims into one rejection.
- Include a claim interpretation section in the office action, if necessary.
- If relying on KSR, ensure the rationale is applied in a clear fashion. For example, for “Combining Prior Art Elements According To Known Methods To Yield Predictable Results,” make sure to state what the known method and the predictable results are.
- If a term has a special definition, state where it is defined in the specification as support for your interpretation.
- If 35 USC 112(f) is invoked, use the appropriate form paragraphs and cite from the specification the structure that performs the function. Note if support is not found in the specification, then make appropriate 35 USC 112(b) rejection(s).
- If using case law in the rejection, only use it to support the rationale in an obviousness rejection.
- If claim language suggests or makes optional some structure or steps, identify that language and provide an explanation as to whether it imposes a limitation on the claim scope.

- When functional language is recited in the claim without invoking 35 USC 112(f), add a statement as to whether it has been given patentable weight along with an explanation.

2. Allowances

- State the particular allowable subject matter and how the prior art teachings neither anticipate nor render obvious the allowable subject matter in combination with the other claimed limitations.
- Cite the pertinent arguments by the applicant (e.g. affidavits/declarations) that were persuasive.
- Cite to the document(s) in the prosecution history where allowable subject matter was described if not rewritten in the notice of allowability to provide a “roadmap” to allowance by referring back to previously described reasons for allowance during prosecution.
- Cite any newly discovered prior art and explain why it is relevant to the allowable subject matter to have a complete record of the state of technology at the time you indicated the allowability of the claimed subject matter.
- Address each independent claim separately.

3. Interview Summary

- If prior art was discussed, explain the specifics of how the applicant viewed your position and vice versa. If the applicant clarifies to you how they are reading the prior art, detail your position in writing in the interview summary.
- If applicant deviates from the agenda to talk about other arguments and/or claims, address that in the interview summary and how you responded.
- State if proposed claim amendments were discussed during the interview and indicate whether or not they overcome the prior art of record.
- If you decide to change your perspective about how the search was conducted in view of applicant’s arguments, consider addressing on the record that you will follow a new search approach and describe what that approach will be (e.g., other classes not previously searched, new search strings that were not searched before, etc.).

- Indicate whether or not an agreement was reached for all issues (e.g. arguments and/or proposed amendments).
- Consider conducting pre-search interviews or other timely interviews with the applicant to resolve any issues to claim interpretation or clear up issues to promote compact prosecution.

4. Other

- If relying on new prior art for an amendment, consider going the extra step of addressing why this new prior art overcomes the claim limitations, rather than simply stating the arguments are moot.

Lessons Learned/Moving Forward

The Office will continue to analyze the results of this pilot and work with stakeholders to determine what actions to take based on the results. In addition, the Office is considering conducting a second phase of this pilot to gather additional information regarding how various techniques impact clarity.

Clarity of the Record Training: Improving Clarity and Reasoning in Office Actions Training (ICR Training)

Website: <https://www.uspto.gov/patent/initiatives/clarity-record-training-improving-clarity-and-reasoning-office-actions-training>

Executive Lead: Don Hajec, Assistant Deputy Commissioner for Patent Operations

Objectives

The Clarity of the Record Training program was to develop and provide training for examiners on effective ways to improve all aspects of the clarity of the prosecution record.

Background

The Office routinely conducts examiner training to keep examiners informed about changes in the law and in technology. In the past, such training was structured to mainly emphasize only the legal or technical subject matter of the training. As part of this program, clarity of the record is now being emphasized as a component of

examiner training by sharing best practices for enhancing clarity of the record through the use of pointers for enhancing clarity, form paragraphs, and hands-on workshops. For example, as part of 35 USC 101 training, the Office not only taught the relevant changes in the law, but also included examples on how to write clear rejections as well as tips for responding to arguments. In addition, the Office has been working to improve the consistency of examiner training and made several changes, such as using a workshop-style format for training, as part of this training effort.

Results

The ICR Training Courses provided to examiners are as follows:

- 35 USC 112(f): Identifying Limitations that Invoke 35 USC 112(f)
- 35 USC 112(f): Making the Record Clear
- 35 USC 112(f): Broadest Reasonable Interpretation and Definiteness of 35 USC 112(f) Limitations
- 35 USC 112(f): Evaluating Limitations in Software-Related Claims for Definiteness under 35 USC 112(b)
- Broadest Reasonable Interpretation (BRI) and the Plain Meaning of Claim Terms
- Examining Functional Claim Limitations: Focus on Computer/Software-related Claims
- Examining Claims for Compliance with 35 USC 112(a): Part I Written Description
- Examining Claims for Compliance with 35 USC 112(a): Part II - Enablement
- 35 USC 112(a): Written Description Workshop
- 35 USC 112(b): Enhancing Clarity By Ensuring That Claims Are Definite Under 35 USC 112(b)
- 2014 Interim Guidance on Patent Subject Matter Eligibility
- Abstract Idea Example Workshops I & II
- Enhancing Clarity By Ensuring Clear Reasoning of Allowance Under 37 CFR 1.104(e) and MPEP 1302.14
- 35 USC 101: Subject Matter Eligibility Workshop III: Formulating a Rejection and Evaluating the Applicant's Response
- 35 USC 112(b): Interpreting Functional Language and Evaluating Claim Boundaries - Workshop

During fiscal year 2016, the Office started to rely more on small, workshop-style training, than on large, lecture-style training. The Office also started to use small groups of trainers to run the training sessions to improve consistency of content delivery. While these changes are very resource intensive, these changes were favorably received by examiners, as shown in Table 1.

Furthermore, based on an analysis conducted as part of the “Compliance of rejections with 35 USC 101 official guidance” case study, the Office recognized statistically significant improvements in the correctness and clarity of 35 USC 101 rejections following the 35 USC 101 Workshop III training. For more information on the results of this case study, please see the summary in this booklet on the Topic Submission for Case Studies program.

Lessons Learned/Moving Forward

In view of the successes of this program, the Office will continue to emphasize clarity of the record as part of future examiner training. The Office will also continue to employ a workshop-style format for future training, where appropriate, and to deliver future training using small groups of highly-trained trainers.

Post Grant Outcomes

Website: <https://www.uspto.gov/patent/initiatives/post-grant-outcomes>

Executive Lead: Jack Harvey, Assistant Deputy Commissioner for Patent Operations

Objectives

The Post Grant Outcomes program has three objectives: 1) to identify prior art introduced in post-grant proceedings that is relevant to related cases undergoing prosecution, 2) to simplify access to this prior art for evaluation by examiners, and 3) to identify common trends from the outcomes of post-grant proceedings to create focused examiner training.

Background

America Invents Act (AIA) trials contain prior art and arguments that might be highly relevant to the patentability determination of a related application currently undergoing examination. In April 2016, the Office launched a pilot to notify examiners via email when they had an application related to a patent being challenged in an AIA trial, and streamlined access to the contents of the trial by pinpointing for examiners the most relevant documents. The Office then surveyed the examiners to gain detailed feedback. Based in part on this feedback, the Office deployed an upgrade in August 2016 to the examiners’ desktop application viewer which allows automated access to the contents of related AIA trials, including access to any cited prior art.

| Level of "agreement" from workshop participants | Levels that "Strongly Agree" and "Agree" | | | | | | |
|--|--|------------------------|------------------------|-------------------------|------------------------|-------------------------------|----------------------------------|
| | 35 USC 112(a) Workshop | 35 USC 112(b) Training | 35 USC 101 Workshop II | 35 USC 101 Workshop III | 35 USC 112(b) Workshop | Improve Reasons for Allowance | FY16 Interview Practice Training |
| The training format was effective in increasing my understanding of the course content | 85.5% | 78.1% | 82.3% | 85.4% | 85.6% | 91.7% | 85% |
| Course materials and/or examples were favorable to learning | 83.5% | 77.7% | 80.4% | 82.1% | 81.7% | N/A | 72.4% |

Table 1: Percent of workshop participants who “strongly agreed” or “agreed” that the given workshop was effective/favorable to learning

Results

With respect to the first objective, the Office collected survey results from approximately 330 examiners regarding the pilot. The survey results showed that examiners found the Patent Trial and Appeal Board (PTAB) information—especially the initial petition (including the prior art citations), the PTAB’s institution decision, and any expert declarations—to be highly useful. The Office also found that 46% of the examiners referred to at least one reference cited in the AIA trial petition during the examination of their own case, either by citing it in a rejection or as pertinent prior art. If an examiner did not use or cite the prior art from the trial, it was most likely because the claims were different between the “parent” and the “child” case, the examiner disagreed with the AIA petitioner’s analysis of the prior art and/or claims, or the examiner was able to find better art.

With respect to the second objective, the Office is currently analyzing data gathered about the AIA trials with respect to prior art searching and claim interpretation, and also working to thoroughly analyze how PTAB trials impact related applications.

With respect to the final objective, the Office is planning on providing examiners with a periodic review of post-grant outcomes focused on Supreme Court, Federal Circuit, district court, and PTAB decisions that relate to their specific technological area. By providing this information, examiners will gain a better understanding of the current state of the law and what happens to a patent after it leaves the USPTO.

Lessons Learned/Moving Forward

The Office will continue to work with stakeholders to explore ways to incorporate information gathered from post-grant proceedings, including reexaminations and district court trials, to improve the examination process.

Scientific and Technical Information Center (STIC) Awareness Campaign

Website: <https://www.uspto.gov/patent/initiatives/scientific-and-technical-information-center-stic-awareness-campaign>

Executive Lead: Deborah Stephens, Associate Commissioner for Patent Information Management

Objectives

The STIC Awareness Campaign was to raise awareness of the search tools and resources, such as search advice and translation services, that are currently available to examiners through STIC.

Background

STIC is a one-stop resource for all patent examination reference needs. STIC staff assist examiners with searching prior art, translating foreign documents, and accessing non-patent literature in print and electronic format. The STIC Awareness Campaign began in August 2015 and continued for 12 months. Through a series of focused marketing campaigns, STIC spread the message to the examining corps about available resources to promote increased use of products and services.

Results

STIC achieved many milestones throughout the duration of the 12-month campaign, and the following initiatives highlight STIC’s accomplishments. Overall, STIC’s participation in Art Unit meetings increased from 45 to 115 sessions between FY15 and FY16, and attendance increased from 1,063 to 2,597.

1. Computer-Based Training (CBT) Series

STIC created a computer-based training series to instruct the examining corps on how to conduct more targeted searches with the goal of increasing examiner search proficiency and yielding better search results. The CBT is a series of four 15-minute videos on searching mathematical formulas. STIC plans to continue developing CBTs and is in the process of producing a second series with a commercial database vendor, Thomson Reuters, specific to searching Derwent in EAST.

2. Technology Center Roadshows

STIC embarked on a roadshow across Technology Centers (TCs) and presented customized material to each TC. The TC Roadshows increased STIC awareness by providing TC Directors and Supervisory Patent Examiners (SPEs) with an overview of STIC’s mission and the portfolio of services available to aid in the patent prosecution process. Through the TC Roadshows, STIC established a relationship with TC Directors and SPEs, and now have a point of contact for regular engagement with the examining corps.

3. Patents Training at Headquarters (PaTH) Expo

STIC participated in the Patents Training at Headquarters (PaTH) Expo. PaTH is a USPTO-wide initiative that aims to enrich team collaboration within USPTO’s remotely connected work staff. STIC participated in both TC3600 and TC1600 PaTH events in May and August 2016, respectively. Through 10+ display tables showcasing STIC’s resources available to the examining corps, STIC reached over 800 examiners in total between the two events.

These two PaTH Expos have been considered a success based on anecdotal feedback from attendees, TC Directors, and an Assistant Deputy Commissioner, as well as a record of increased examiner engagement. As an example, the TC3600 PaTH Expo occurred in the third quarter of FY16 and during this three-month period the number of STIC Staff Assists¹ significantly increased, reaching 3,186 requests, as shown in **Figure 1**. This is an unprecedented volume for STIC Staff Assists, and the Q3 FY16 service data indicates a 64% increase over Q3 FY15.

STIC plans to continue its involvement with PaTH as a primary means to engage with the examining corps. The next PaTH expo is scheduled for May 2017 and all TC events are scheduled to occur by 2019.

4. Quality Fair

In March 2016, STIC participated in the Patent Quality Fair sponsored by the Office of the Deputy Commissioner for Patent Quality. The Quality Fair provided an opportunity to explain the purpose

¹ A “STIC Staff Assist” is defined as any interaction between a STIC staff member and customer (e.g., fielding a reference question from an examiner).

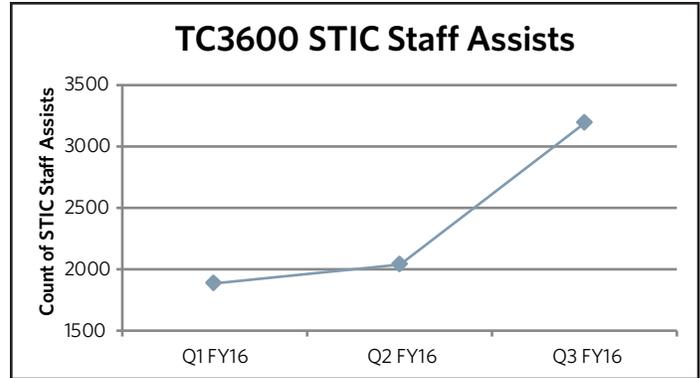


Figure 1: Number of STIC Staff Assists in TC 3600 in the first three quarters of fiscal year 2016

and objectives of the 12 EPQI programs to USPTO employees. STIC advertised its services through displays and handouts at a booth during the Quality Fair. By participating in the Quality Fair event, STIC achieved great exposure as over 10% of the workforce attended the event in person or through Livestream broadcast.

5. Enhancements to the STIC Website

Examiners access electronic resources and request products and services through the STIC website. Throughout the STIC Awareness Campaign, STIC made several enhancements to its website in order to promote more efficient use of STIC resources by examiners, including:

- Producing a STIC Awareness video to provide insight on all of STIC’s services available to help examiners with their searching needs
- Creating a STIC Demos, Training & Events page within the website
- Developing an electronic catalogue of STIC resources and training, which provides listings of multidisciplinary professional and industry collections for all technologies, arts, and sciences
- Featuring monthly Quality Resources relevant to patent examination, such as Quick Reference Guides (QRG) with tips on how to access and use particular resources

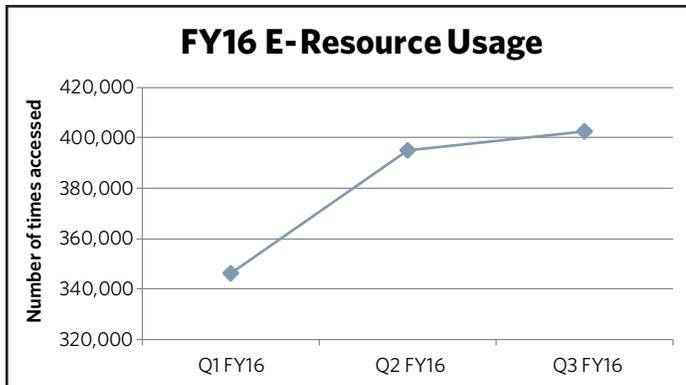


Figure 2: E-Resource Usage for First Three Quarters of Fiscal Year 2016

Since the inception of the STIC Awareness Campaign in August 2015 and the enhancements made to the STIC website over the last year, the cumulative usage rates² for electronic resources (e-books and e-journals) increased during the first three quarters of FY16, as shown in Figure 2.

Lessons Learned/Moving Forward

The success of the STIC Awareness Campaign has demonstrated the need for STIC to continue its engagement with the examining corps. Although the EPQI-sponsored STIC Awareness Campaign concluded in August 2016, STIC will continue to build on the many efforts that the STIC Awareness Campaign started and incorporate these efforts into standard functions of STIC moving forward.

Topic Submission for Case Studies

Website: <https://www.uspto.gov/patent/initiatives/topic-submission-case-studies-pilot-program>

Executive Leads: Brian Hanlon, Director, Office of Patent Legal Administration

Marty Rater, Acting Director, Office of Patent Quality Assurance

Objectives

The Topic Submission for Case Studies program was developed to provide our stakeholders with an opportunity to suggest patent-quality related topics for case studies that may be conducted by the Office of Patent Quality Assurance (OPQA).

² Q3 data includes estimated usage rates as data for all e-resources is not yet available.

Background

The Office uses case studies to identify quality issues as well as examples of examination best practices. In December 2015, the Office published a Federal Register Notice inviting our stakeholders to submit patent-quality related topics to be the subject of a case study. By the time the comment period closed in February 2016, the Office received over 135 compliant submissions from 110 requestors, including IP organizations, law firms, companies, and individuals. The Office ultimately selected six topics as follows:

1. Compliance of rejections with 35 USC 101 official guidance
2. Consistency of application of 35 USC 101 across Art Units/Technology Centers
3. Use of compact prosecution when making 35 USC 101 rejections
4. Correctness and clarity of motivation statements in 35 USC 103 rejections
5. Enforcement of 35 USC 112(a) written description in continuing applications
6. Consistent treatment of claims after May 2014 35 USC 112(f) training

Results

To date, the Office has completed case studies 1, 4, and 6, and expects to publish reports on each of these studies in the first quarter of fiscal year 2017. The Office also expects to publish results for case studies 2, 3, and 5 no later than March 2017.

Case Study #1. Compliance of rejections with 35 USC 101 official guidance

This study addresses the top concern presented by stakeholders in their suggestions for case studies - whether examiners are correctly making subject matter eligibility rejections under USPTO examination guidance concerning 35 USC 101 and whether the rejections clearly communicate the rationale for the rejection to the applicant. A representative sample of 816 Office actions having an Alice/Mayo-type 35 USC 101 rejection were randomly chosen for study. Office actions were selected from those issued between January 2016 and August 2016 by the examination corps. Compliance with USPTO examination guidance was analyzed at multiple levels of

granularity, starting with the overall eligibility result and digging deeper into the presentation of the examiner's reasoning in the rejection.

This study further investigated the effect of examiner training on formulating 35 USC 101 rejections. In the middle of the study period, the examination corps was given additional guidance on formulating 35 USC 101 rejections in the form of a "May 2016 Subject Matter Eligibility Update" and associated training. Results before and after the training were compared to determine the effect of the training.

The primary results of the study are as follows:

1. Are examiners following 35 USC 101 Guidance?
 - a. 90% of the rejected claims are actually ineligible under USPTO 35 USC 101 Guidance.
 - b. Where the rejected claim was actually ineligible, 75% of the rejections were properly explained.
 - c. In total, 68% of all studied rejections were properly explained and were of actually ineligible claims.
2. What improvements were found as a result of the May-June 2016 training on formulating 35 USC 101 rejections?
 - a. Properly explained rejections of ineligible claims rose from 62% to 74%.
 - b. Correct identification of a judicial exception in Step 2A rose from 85% to 91%.
 - c. Proper explanation of why the claimed elements do not provide significantly more than the judicial exception in Step 2B rose from 64% to 75%.
3. What are the drivers of compliance with Guidance for 35 USC 101 rejections?
 - a. Some technology areas are high-performing.
 - b. Some aspects of 35 USC 101 rejections are being performed well and have little room to improve.
 - c. Some technology areas can improve recognition and recordation of claimed abstract ideas (Step 2A).
 - d. Many technology areas can better record additional elements, such as generic processor (Step 2B).

Case Study #4. Correctness and clarity of motivation statements in 35 USC 103 rejection

This study was based on data collected by OPQA from a total of 4,916 Office action reviews and focused on the correctness and clarity of 35 USC 103 rationale statements. Due to the size of the sample set, the Office was able to examine the variation between examiners based on signatory authority, as well as between non-final Office actions and final Office actions. The study resulted in the following findings:

1. While 95% of the reviewed Office actions that had 35 USC 103 rejections contained at least one correctly and clearly articulated rationale, only 60% of all rationale statements were found to be correct and 70% of all rationale statements were found to be clearly articulated.
2. Office actions by examiners without signatory authority were more likely to have correct and clear rationale statements than Office actions by examiners with signatory authority.
3. There was no correlation between action type and either correctness or clarity of rationale statements.
4. 88% of the rationale statements that were found to be clear were also found to be correct.

Case Study #6. Consistent treatment of claims after May 2014 35 USC 112(f) training

This study evaluated the treatment of claims with regard to 35 USC 112(f) after the May 2014 training on this topic. The study was based on a review of 2,282 first Office actions on the merits issued during the first half of fiscal year 2016. The reviews, which primarily focused on product/apparatus claims, assessed whether examiners properly documented their determinations with regard to 35 USC 112(f) being invoked and whether examiners appropriately used 35 USC 112(b) rejections with respect to their 35 USC 112(f) determinations. The study resulted in the following findings:

1. Examiners documented their determinations with regard to 35 USC 112(f) being invoked in only 22% of the reviewed Office actions.
2. When such documentation was present, 94% of the examiners' determinations under 35 USC 112(f) were found to be correct.
3. Reviewers identified an omitted 35 USC 112(b) rejection related to the 35 USC 112(f) determinations in 18% of the reviewed Office actions.

Lessons Learned/Moving Forward

The Office will continue to analyze the results of case studies 1, 4, and 6 to determine what actions to take based on these results. The Office will also look to stakeholders for input on the best path to take. In addition, the Office will continue to work on completing case studies 2, 3, and 5 so as to publish results for these case studies no later than March 2017. At the conclusion of all case studies, the Office will evaluate the process used to solicit topics for case studies from stakeholders to determine the best way to continue stakeholder involvement in the Office's use of case studies.

Pillar 2 - Excellence in Measuring Patent Quality

Clarity and Correctness Data Capture (CCDC)

(Master Review Form or MRF)

Website: <https://www.uspto.gov/patent/clarity-and-correctness-data-capture>

Executive Leads: Bonnie Eyler, Director, Technology Center 1700

Marty Rater, Acting Director, Office of Patent Quality Assurance

Objectives

The Clarity and Correctness Data Capture program was instituted to create an improved data capture system that enables all reviewers, from both the Office of Patent Quality Assurance (OPQA) and supervisors in the Technology Centers (TCs), to consistently document and access quality review data in one place.

Background

Historically, Office reviews of finished work products, e.g., signed Office actions, have been performed not only by reviewers in OPQA, but also by reviewers in the TCs. Because OPQA and the TCs had different reviewing criteria, any resulting data could not be aggregated or compared across reviewing areas. Consequently, only OPQA reviews were systematically recorded for

identification of trends across the examining corps. In addition, all of these reviews mainly assessed the correctness of the Office action with only a basic assessment of the clarity of the examiner's position.

Results

The Office developed a comprehensive review form, called the Master Review Form, to capture data about both the correctness and clarity of finished Office actions. Since the Master Review Form was launched in OPQA in November 2015, the Office has continued to refine the form. As part of the refinement process, the Office published a Federal Register Notice in March 2016 seeking feedback on the form. The Office received 32 comments by the time the comment period closed in May 2016, and the comments had a general theme that the granularity of given sections of the form could be improved by asking more detailed questions and that the form needed a guidance document to ensure reviewers were consistently answering questions. The Office refined the form and developed a guidance document in view of this and other feedback and launched a new version of the form in the fourth quarter of fiscal year 2016.

The data from the numerous reviews of Office actions conducted using the Master Review Form are stored in a consistent and minable manner to enable the use of "big data" analysis to analyze and enhance quality at a TC level. As shown in **Figure 3**, OPQA completed over 12,000 reviews in fiscal year 2016 and expects to complete over 18,500 reviews this fiscal year. In contrast, OPQA completed 7,900 reviews in fiscal year 2015. In addition, the supervisors in the Technology Centers, who only started using the Master Review Form in the fourth quarter of fiscal year 2016, completed approximately 4,000 reviews using the Master Review Form last fiscal year. This fiscal year, the Technology Centers are expected to complete approximately 16,000 reviews. The Office is already using this continuously growing database of review information to identify quality trends and provide more precise quality metrics.

Lessons Learned/Moving Forward

The Office is planning on releasing a third version of the Master Review Form in late fiscal year 2017 that will take into account stakeholder feedback, lessons learned from the Clarity of the Record Pilot, and lessons learned from

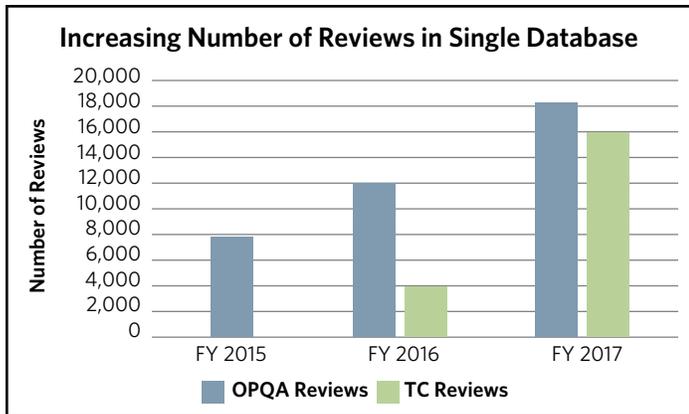


Figure 3: Number of Reviews Completed by OPQA and the TCs to be included in the single database

the case studies done as part of the Topic Submission for Case Studies program. In addition, the Office will continue to analyze the results of the reviews to ensure reviewers are answering questions consistently and will provide additional training for reviewers, if necessary.

Quality Metrics

Website: <https://www.uspto.gov/patent/initiatives/quality-metrics-1>

Executive Lead: Greg Vidovich, Associate Commissioner for Patent Quality

Objectives

The Quality Metrics program was developed to achieve greater accuracy, clarity, and consistency in measuring quality of Office work products.

Background

The Office received feedback that the Quality Composite Score the Office had used to assess examiners' work since fiscal year 2011 was not sufficiently precise because it combined indicators of both work product quality as well as process quality. At the start of fiscal year 2016, the Office discontinued the Quality Composite Score and, in March 2016, proposed a new approach to quality metrics in a Federal Register Notice, categorizing quality metrics as follows:

- Product Indicators, which include metrics on the correctness and clarity of Office work products. The Office formulates these metrics using data from reviews conducted by the Office of Patent Quality Assurance using the Master Review Form.
- Process Indicators, which assist the Office in tracking the efficiency and consistency of internal processes. The Office's current focus is on analyzing reopening of prosecution and rework of Office actions as well as improving consistency of decision making.
- Perception Indicators, which include both internal and external stakeholder surveys to solicit information that can be used by the Office for root-cause analysis and to validate/verify other metrics.

Results

For product indicators, the Office started assessing correctness of Office actions under a framework of "statutory compliance." A statutorily compliant Office action is one that includes all applicable rejections – the action must not omit an applicable rejection – and one in which every asserted rejection is correct in that the decision to reject is based on sufficient evidence to support the conclusion of unpatentability. Statutory compliance is calculated as follows: $\text{Statutory Compliance for a Given Statute} = (\text{Total Reviews} - \text{Reviews Indicating Non-Compliance}) / \text{Total Reviews}$, where $\text{Reviews Indicating Non-Compliance} = \text{Reviews Identifying an Omitted Rejection for a Statute} + \text{Reviews Identifying an Improper Rejection for that Statute}$.

Table 2 shows the USPTO's compliance rates for prior art (both 35 USC 102 and 103), 35 USC 101 and 35 USC 112 for the fourth quarter of fiscal year 2016. The Office's new quality metrics website contains additional breakdowns of the quality metrics information (link above).

For these calculations, the total number of relevant reviews is constant for each statute and includes those reviews that OPQA conducted on randomly sampled Office actions. An action that does not reject a claim under a given statute is considered to be compliant as long as the reviewer does not identify an omitted rejection. For example, the compliance metric for 35 USC 101 includes as a compliant action many actions from technologies that are clearly patent eligible under current law because no 35 USC 101 rejection was made and no rejection was warranted.

| USPTO Statutory Compliance Indicators for Q4 of FY 2016 | | All Reviews | |
|--|---------------|-------------|---------|
| | | Count | Percent |
| Prior Art (35 USC 102 and 103) | Compliant | 3527 | 88.4% |
| | Not Compliant | 461 | 11.6% |
| | Total | 3988 | |
| 35 USC 101 (including utility and eligibility) | Compliant | 3883 | 97.4% |
| | Not Compliant | 105 | 2.6% |
| | Total | 3988 | |
| 35 USC 112 (35 USC 112(a),(b) including (a)/(b) rejections related to 35 USC 112(f)) | Compliant | 3738 | 93.7% |
| | Not Compliant | 250 | 6.3% |
| | Total | 3988 | |

Table 2: USPTO Statutory Compliance Indicators for Q4 of FY 2016

With respect to clarity metrics, the Office is currently working on developing such metrics to be publicly disseminated. As part of this, the Office is working to ensure that the data captured through the Master Review Form is as reliable as possible.

For process indicators, the Office's current focus is on analyzing reopening of prosecution and rework of Office actions as well as improving consistency of decision making. To do this, the Office is evaluating certain types of transactions to identify trends and examiner behaviors indicative of either best practices or potential quality concerns. Rather than setting targets for the particular transactions, the Office is conducting a root-cause analysis on the trends and behaviors to either capture identified best practices or correct issues, as appropriate. It is sometimes desirable for an examiner to reopen prosecution or issue a second non-final rejection, such as when adjusting a rejection in view of changes to the law resulting from a new court decision. By conducting a root cause analysis that focuses on the underlying reasons for the given trends and behaviors, the Office will allow for re-openings and rework where appropriate while providing training to ensure examiners have the necessary skills and resources to be as efficient as possible.

For perception indicators, the USPTO will continue to conduct internal and external perception surveys, which the Office has done semi-annually since 2006. The external survey includes 3,000 frequent-filing customers and the internal survey is of 750 randomly selected patent examiners. The survey results will be used to validate other quality metrics.

Lessons Learned/Moving Forward

The Office will continue to work with stakeholders to refine the Office's compliance metrics and develop clarity metrics and targets to ensure that the Office takes full advantage of the information gathered using the Master Review Form and to ensure that the metrics provide an accurate, clear, and consistent measurement of the quality of Office work products.

Pillar 3 - Excellence in Customer Service

Design Patent Publication Quality

Executive Lead: Robert Olszewski, Director, Technology Center 2900

Objectives

The Design Publication Quality program was created to improve the image quality of published design patents.

Background

The Office received feedback that the images published as part of design patent grants were degraded compared to the images that applicants provided to the Office with initial filings. After investigating this issue, the Office identified a specific conversion process that was mainly responsible for the degraded quality of the images.

Results

On October 4, 2016, the USPTO implemented a new process for publishing design patent grants, which has significantly improved the image quality of these grants.³ Figure 4 shows an example of the improvement in image quality the Office gained through this new process by showing an image as it would have been published under the old process and the same image as it would be published under the new process. The Office is also loading these grants with improved images into the Supplemental Content in PAIR to allow external stakeholders to download an exact, clear copy of the grants.

³ The images on the front page of the grant may not be as clear and as the actual drawing figures in the main portion of the grant due to the necessity of scaling down the images to fit on the grant front page.

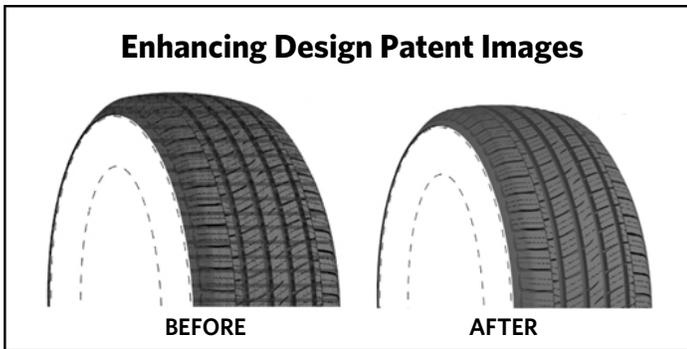


Figure 4: An image as it would have been published under the old process (“before”) and the same figure as it would be published under the current process (“after”)

Lessons Learned/Moving Forward

The Office is currently researching further ways to improve the quality of images in patent grants for both design patents and utility patents, and the Office will continue to work with stakeholders to identify other ways to improve the Office’s products.

Interview Specialist

Website: <https://www.uspto.gov/patent/laws-and-regulations/interview-practice/interview-specialist>

Executive Lead: Tim Callahan, Director, Technology Center 2400

Objectives

The Interview Specialist program is to provide subject matter experts in each Technology Center and Regional Office on interview practice and policy to assist both applicants and examiners with interviews, including assisting with technical issues that may arise (e.g., video-conferencing problems).

Background

Interviews have proven to be a valuable tool for both examiners and applicants to resolve issues and advance prosecution, and the Office continues to work to make interview practice as productive and effective as possible.

Results

As shown in Figure 5, the number of interviews conducted by the Office continues to increase. To provide further assistance with interviews to our stakeholders, the Office created an Interview Specialist role within each Technology Center and Regional Office. Interview Specialists are subject matter experts on interview practice and policy who assist both applicants and examiners with interviews, including facilitating and assisting with technical issues that may arise (e.g. video-conferencing problems, public interview room setup). A total of 42 interview specialists are currently in place.

Lessons Learned/Moving Forward

The Office will continue to work with stakeholders to identify ways to ensure that interview practice is as productive and effective as possible.

Post-Prosecution Pilot (P3)

Website: <https://www.uspto.gov/patent/initiatives/post-prosecution-pilot>

Executive Lead: Remy Yucel, Assistant Deputy Commissioner for Patent Operations

Objectives

The Post-Prosecution Pilot (P3) program was developed to consolidate existing after-final pilot programs to achieve more compact prosecution and to reduce the number of appeals while increasing the appeal affirmance rate.

Background

The P3 program builds on popular features of the Pre-Appeal Brief Conference Pilot program and the After Final Consideration Pilot 2.0 (AFCP 2.0) program to provide applicants with an additional after-final option. Specifically, it allows applicants to make an oral presentation to a panel of examiners after a final rejection has been issued, but before the filing of a notice of appeal, to discuss a proposed amendment or argument. After the oral presentation, the panel is required to provide a brief written summary of the status of the pending claims as well as the reasons for maintaining any rejection.

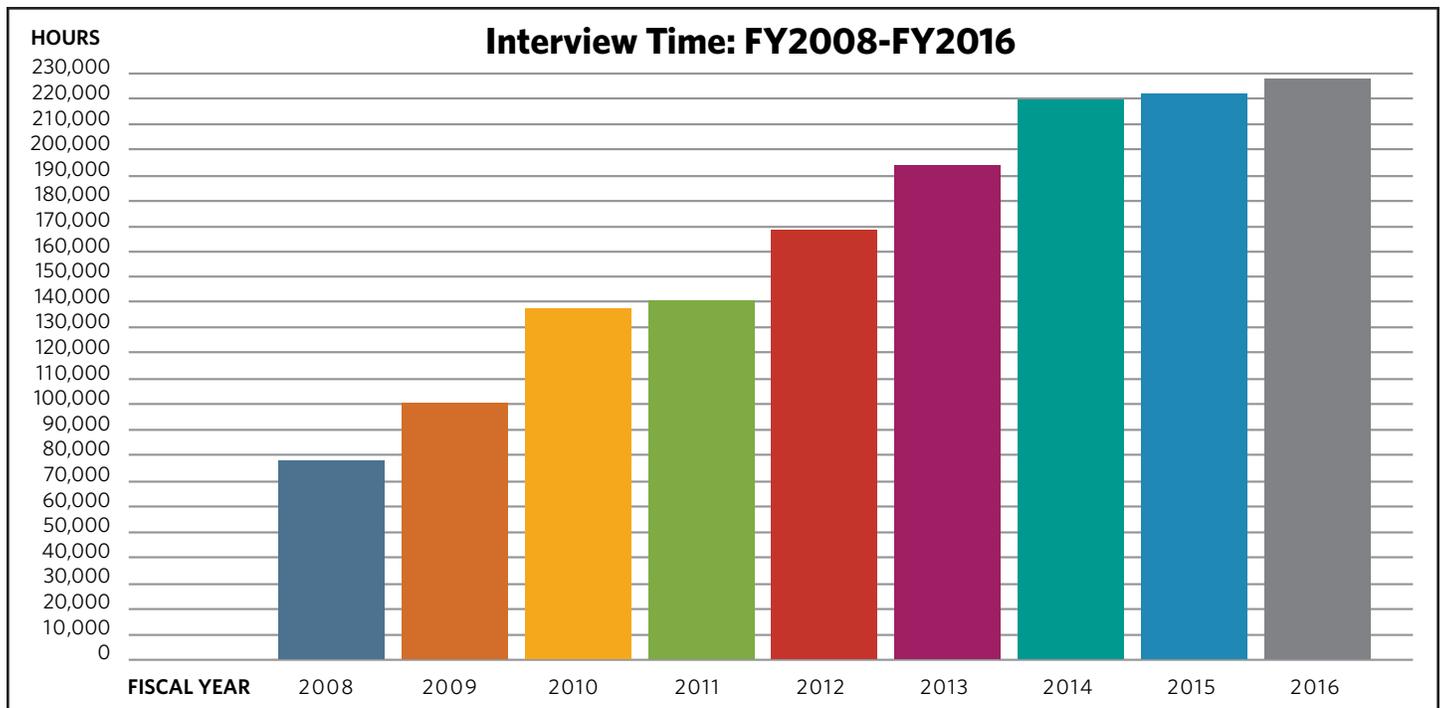


Figure 5: Number of interview hours from FY 2008 to FY 2016

The P3 program began on July 11, 2016, and will conclude after 6 months (i.e. on January 12, 2017) or upon receipt of 1,600 complaint requests (200 per Technology Center), whichever occurs first. Thus, the end of the P3 program will vary by Technology Center. The P3 website includes a tally for each Technology Center showing whether or not a Technology Center is still accepting applications for the pilot. Additional requirements for filing a P3 request can be found on the P3 website

Results

As of December 8, 2016, the TC breakdown of approved P3 requests was as follows:

- TC 1600 113
- TC 1700 198
- TC 2100 TC limit reached - no longer accepting requests
- TC 2400 TC limit reached - no longer accepting requests
- TC 2600 TC limit reached - no longer accepting requests
- TC 2800 TC limit reached - no longer accepting requests
- TC 3600 TC limit reached - no longer accepting requests
- TC 3700 TC limit reached - no longer accepting requests

Of requests that were rejected for entry, the vast majority exceeded the 5-page limit.

Of the 995 decisions that have been rendered, 601 had the final maintained (60.4%), 184 had prosecution reopened (18.5%), and 210 were allowed (21.1%).

Lessons Learned/Moving Forward

As the pilot is still ongoing, the Office is continuing to collect information, including results of internal and external surveys and statistical data on pilot cases. At the conclusion of the pilot, the Office will analyze this information and work with stakeholders to determine next steps.

Re-Evaluation of Quick Path Information Disclosure Statement (QPIDS)

Website: <https://www.uspto.gov/patent/initiatives/quick-path-information-disclosure-statement-qpids>

Executive Lead: Kathy Matecki, Director, Technology Center 3600

Objectives

This program is to investigate improvements to the Quick Path Information Disclosure Statement (QPIDS) program, which provides for consideration of an Information Disclosure Statement (IDS) after payment of the issue fee without the need to process an accompanying request for continued examination (RCE), to make the process more efficient.

Background

The number of QPIDS requests received by the Office has increased steadily since the program was implemented in 2012, and has now leveled off at approximately 3,000 QPIDS requests in each of fiscal years 2015 and 2016. Current rules dictate many requirements for the QPIDS program, such as the need for an e-Petition to Withdraw from Issue after Payment of the Issue Fee (37 CFR 1.313(c)(2)), a timeliness statement under 37 CFR 1.97(e), and an IDS fee (37 CFR 1.17(p)). The Office received feedback that the QPIDS program should be evaluated for improvements.

Moving Forward

To improve the QPIDS process, the Office considered possible rule changes but decided to pursue other improvements due to the length of time it would take to implement such rule changes. The Office is currently updating the resources available on the Patent Application Initiatives (PAI) website and developing refresher training for Technology Center QPIDS experts and technical support staff. The Office is also considering improvements to the internal tracking process for QPIDS requests. The Office will continue to evaluate the QPIDS program to determine ways to improve the process.

Biographies

Michelle K. Lee

As the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (USPTO), Michelle K. Lee provides leadership and oversight to one of the largest intellectual property offices in the world, with over 12,000 employees and an annual budget of over \$3 billion. Ms. Lee also serves as the principal advisor to the President, through the Secretary of Commerce, on domestic and international intellectual property policy matters. Ms. Lee is the first woman to serve as Director of the U.S. Patent and Trademark Office in the country's history.

Prior to public service, Ms. Lee has spent most of her professional career advising some of the country's most innovative companies on technical, legal, and business matters. She was Deputy General Counsel for Google and the company's first Head of Patents and Patent Strategy. She joined the company when it was relatively young, and was responsible for formulating and implementing its patent strategy for all of its products and services worldwide. She also served as a partner at the Silicon Valley-based law firm of Fenwick & West LLP, where she advised a wide range of high-technology clients from startups to Fortune 100 companies intellectual property, licensing, litigation and corporate matters. Before her career as a legal advisor to technology companies, Ms. Lee worked as a computer scientist at the M.I.T. Artificial Intelligence Laboratory and Hewlett-Packard Research Laboratories.

Ms. Lee worked in the federal judiciary as a law clerk on the U.S. Court of Appeals for the Federal Circuit for Judge Paul R. Michel and District Court for the Northern California for Judge Vaughn R. Walker. She holds a B.S. and M.S. in Electrical Engineering and Computer Science from M.I.T., as well as a J.D. from Stanford Law School.

Ms. Lee has been recognized by numerous organizations for her work including by Politico Magazine as one of the "Top 50 Most Influential Visionaries in American Public Policy" in 2015, by Washingtonian Magazine as a "Tech Titan" in 2015, and by the San Francisco Business Times and San Jose Business Journal as the Best Bay Area IP Lawyer in 2012 and one of the top 100 most influential women in the Silicon Valley in 2013.

Russell Slifer

As Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the United States Patent and Trademark Office, Russell Slifer provides strategic leadership and oversight to one of the largest intellectual property offices in the world.

Most recently, Mr. Slifer served as the Director of the Rocky Mountain Regional United States Patent and Trademark Office, where he led efforts to foster business and technological innovation. His team promoted economic development and intellectual property knowledge throughout the Rocky Mountain region. He encouraged increased cooperation between USPTO stakeholders, the patent and trademark applicants, the intellectual property bar, businesses, and the education community in the region. In addition, Mr. Slifer advised the USPTO on a variety of policy matters.

Before joining the USPTO, Mr. Slifer served as Chief Patent Counsel for Micron Technology in Boise, Idaho where he developed an effective worldwide patent portfolio strategy. He was also a Principal at Schwegman Lundberg & Woessner in Minneapolis, advising a wide range of high-technology clients from start-ups to Fortune 100 companies on intellectual property matters.

Mr. Slifer has also held a number of leadership positions, including President of the Association of Corporate Patent Counsel and Board Member of the Intellectual Property Owners Association. Prior to his legal career, Mr. Slifer was a design engineer for Honeywell.

Mr. Slifer received his Bachelor of Science degree in Electrical Engineering from Iowa State University, as well as a J.D. from Northern Illinois University.

Andrew Hirshfeld

Andrew (Drew) Hirshfeld is Commissioner for Patents for the U.S. Patent and Trademark Office. He was appointed to this position in July 2015.

As Commissioner for Patents, Mr. Hirshfeld manages and leads the patent organization as its chief operating officer. He is responsible for managing and directing all aspects of this organization which affect administration of patent operations, examination policy, patent quality management, international patent cooperation, resources and planning, and budget administration.

In his previous role as Deputy Commissioner for Patent Examination Policy, Mr. Hirshfeld served as an authority on patent laws, rules, and examining practice and procedure, and provided administrative oversight and direction for the activities of the Office of Petitions, Office of Patent Legal Administration, and the Office of the Manual of Patent Examining Procedure. Further, Mr. Hirshfeld established patent examination and documentation policy standards for the Commissioner for Patents.

Prior to serving as Deputy Commissioner for Patent Examination Policy, Mr. Hirshfeld was the Chief of Staff to the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Mr. Hirshfeld began his career at the USPTO in 1994 as a Patent Examiner. He became a Supervisory Patent Examiner in 2001, and was promoted to the Senior Executive Service in 2008 as a Group Director in Technology Center 2100, Computer Architecture and Software.

Mr. Hirshfeld received a Bachelor of Science from the University of Vermont, and a J.D. from Western New England College School of Law.

Other Speakers (listed alphabetically)

Robert Armitage

Mr. Robert A. Armitage is a consultant on IP strategy and policy issues. He formerly served as Senior Vice President and General Counsel of Eli Lilly and Company (2003-2012) and as Lilly's Vice President and General Patent Counsel (1999-2002). He was a partner in the Washington, D.C., office of Vinson & Elkins LLP (1993 to 1999) following a 20-year career at The Upjohn Company where he served as Upjohn's chief IP counsel from 1983-1993.

He has served in a variety of leadership positions in the intellectual property bar, including as president of both the American Intellectual Property Law Association and the Association of Corporate Patent Counsel and chair of the Intellectual Property Law Section of the American Bar Association. Other leadership positions include service as chair of the following organizations: the National

Council of Intellectual Property Law Associations (NCIPLA), the Fellows of the American Intellectual Property Law Association, the Patent Committee of the Pharmaceutical Research & Manufacturers of America (PhRMA), the Intellectual Property Committee of the National Association of Manufacturers (NAM), and the Intellectual Property Law Section of the State Bar of Michigan. He has also served as a member of the board of directors of both Intellectual Property Owners (IPO) and the National Inventors Hall of Fame Foundation (NIHFF). Mr. Armitage currently serves as a member the board of directors for the American Intellectual Property Law Education Foundation.

Mr. Armitage received a Bachelor of Arts degree in physics and mathematics in 1970 from Albion College. He was awarded a Master's degree in Physics from the University of Michigan in 1971 and a Juris Doctor degree from the University of Michigan Law School in 1973.

Robert Bahr

Robert (Bob) Bahr entered the USPTO in 1984 and served as a primary examiner in what is now Technology Center 3700, primarily in the art areas of physical therapy and exercising equipment. In 1994, he became a Legal Advisor in what is now the Office of Patent Legal Administration, and in 2000, Mr. Bahr became the Senior Patent Counsel to the Deputy Commissioner for Patent Examination Policy.

Mr. Bahr is currently the Deputy Commissioner for Patent Examination Policy. Mr. Bahr has been involved in virtually every patents-related rule making since 1995, notably the changes to implement the Leahy-Smith America Invents Act and the American Inventors Protection Act of 1999. Bob has been awarded two Department of Commerce Gold Medals and two Department of Commerce Bronze Medals. Mr. Bahr has a Bachelor of Science in Mechanical Engineering from the University of Maryland, and a Juris Doctor from George Washington University, and is a member of the Virginia Bar.

The Honorable Raymond Chen

Raymond Chen was appointed to the United States Court of Appeals for the Federal Circuit by President Barack H. Obama in 2013, confirmed by the Senate on August 1, 2013 and assumed his office on August 5, 2013.

Judge Chen served as Deputy General Counsel for Intellectual Property Law and Solicitor at the United States Patent and Trademark Office from 2008 to 2013. He was an Associate Solicitor in that office from 1998 to 2008. From 1996 to 1998, Judge Chen served as a Technical Assistant at the United States Court of Appeals for the Federal Circuit. Before joining the court staff, Judge Chen was an associate with Knobbe, Martens, Olson & Bear from 1994 to 1996. Before entering law school, Judge Chen worked as a scientist at the law firm of Hecker & Harriman from 1989 to 1991.

Judge Chen received his J.D. from the New York University School of Law in 1994 and his B.S. in Electrical Engineering from the University of California, Los Angeles in 1990.

Colleen Chien

Professor Colleen Chien is nationally known for her research and publications surrounding domestic and international patent law and policy issues. She serves as a consultant to the White House Office of Science and Technology Policy, where, from 2013-2015 she served as White House Senior Advisor for Intellectual Property and Innovation, working on a broad range of patent, copyright, technology transfer, open innovation, educational innovation, and other issues. She frequently lectures at national law conferences and has published several in-depth empirical studies of the patent system, including patent-assertion entities (PAEs) (a term she coined), patent litigation, and the secondary market for patents.

Prior to joining the Santa Clara University School of Law faculty in 2007, Professor Chien prosecuted patents at Fenwick & West LLP in San Francisco, as an associate and then Special Counsel. She has been a Fellow at the Stanford Center for Law and the Biosciences, and Visiting Senior Scholar at Berkeley Law's Center for Law and

Technology. She also did stints as a strategy consultant at Dean and Company, a spacecraft engineer at NASA/Jet Propulsion Lab, and an investigative journalist at the Philippine Center for Investigative Journalism (as a Fulbright Scholar).

Professor Chien received her A.B. and B.S. in Engineering from Stanford University and her J.D. from Boalt Hall School of Law, University of California, Berkeley.

William Covey

As Deputy General Counsel and Director for the Office of Enrollment and Discipline (OED), William Covey is responsible for ensuring that the nation's patent attorneys and agents are of good moral character and sufficiently knowledgeable to practice before the USPTO. Mr. Covey's team of attorneys and other professionals develop and administer a registration examination designed to measure an applicants' knowledge of patent law and practice. Successful applicants are registered to practice by OED. In addition, OED investigates complaints of unethical conduct made against individuals practicing patent or trademark law before the Office.

Mr. Covey has held a number of key positions in the USPTO including Acting General Counsel, and Deputy General Counsel for the Office of General Law. Mr. Covey was appointed to the Senior Executive Service in 2007. Prior to joining the USPTO in 2000, Mr. Covey was a Special Assistant U.S. Attorney for the District of New Jersey. He also served on active duty in the Pentagon. He is currently a senior officer in the Army Reserve assigned to the Office of the Army General Counsel. He completed combat tours in Iraq (2007) and Afghanistan (2011) and served as Deputy Legal Counsel to the Chairman, Joint Chiefs of Staff.

Mr. Covey received his undergraduate degree from Fordham University (Magna Cum Laude, Phi Beta Kappa) and earned his J.D. from Fordham University Law School in 1991. He graduated from Harvard University's JFK School of Government (Senior Executive Fellowship) in 2005 and the U.S. Army War College with an M.S. (Strategic Studies) in 2010.

Robin Evans

Robin Evans joined the United States Patent and Trademark Office (USPTO) as a patent examiner after receiving a Bachelor of Science degree in Mechanical Engineering from the University of Maryland. She began her career as a patent examiner examining applications in the sprinkler and dispersants technologies. Ms. Evans became a Supervisory Patent Examiner in January 2005 and has supervised the examination of applications in the electrical heating technology and the fluid handling technologies. She became a Management Training Quality Assurance Specialist in 2007 in the mechanical and electrical technologies. Through years of service she has developed a solid understanding of Intellectual Property and as a result was awarded the Department of Commerce Bronze Medal and Exceptional Career Award for exceptional performance and service.

Ms. Evans was named the first Regional Manager of the Elijah J. McCoy Regional Office in Detroit. In this role, she was responsible for handling the daily operations of the first-ever regional office in the over-200 year history of the USPTO. She opened the office in July 2012, and in her first year successfully transformed the office into a highly functional site, staffed with patent examiners and administrative judges. Ms. Evans also served as the Interim Director of the Rocky Mountain Regional Office located in Denver, CO. Ms. Evans is currently a Director in Technology Center 2800, where she and her co-Directors are responsible for leading over 90 managers and over 1600 examiners in the field of Semiconductors, Electrical and Optical systems and components.

Andrew Faile

As the Deputy Commissioner for Patent Operations, Andrew Faile is responsible for all patent examining functions in the nine Patent Technology Centers, the Office of Patent Training and the Central Reexamination Unit. Mr. Faile was the Assistant Deputy Commissioner for Patent Operations for the Electrical Discipline and has over 20 years of experience in patent examining and operations management.

Mr. Faile first joined the USPTO in 1989 as a patent examiner in the areas of cellular telephony, radio frequency communications, and cable television. In 1994, he earned an examiner master's rating in telecommunications. Recently, Mr. Faile served on a joint

management/union task force in charge of modernizing the examiner production system. He was awarded the Department of Commerce Silver Medal for his work on the task force.

Roger Gobrogge

Roger Gobrogge is a Managing Director of ITIP Proficiency, a Michigan based company specializing in IP cost management. His practice focuses on assisting corporate clients reduce global IP costs and implement efficient processes using unique cost and quality metrics developed through big data analysis. Mr. Gobrogge joined ITIP in June 2014. Prior to joining ITIP Mr. Gobrogge was the Head of Intellectual Property at Rolls-Royce Corporation - Americas, the Chief Patent Counsel for Dow Corning Corporation and a Patent Examiner at the USPTO. Mr. Gobrogge served on the IPO Board of Directors and actively participates in a number of other IP organizations.

Mr. Gobrogge earned a Bachelor's Degree in Pharmacy from Wayne State University and Juris Doctor from Michigan State University. He is a member of the Patent Bar as well as the Michigan Bar.

Dr. Stuart Graham

Dr. Stuart Graham, JD, PhD, is Associate Professor of Strategic Management at the Scheller College of Business, Georgia Institute of Technology (Atlanta, Georgia, USA). He teaches and conducts research on business strategy and competition, the economics and policy of patent systems, intellectual property strategy, and technology entrepreneurship. His recent scholarship has been published in the journal *Science*, the MIT Sloan Management Review, the *Journal of Economic Perspectives*, the *Stanford Technology Law Review*, and *Management Science*. During 2010-2013, Dr. Graham served as a member of the executive team as the (first) Chief Economist at the US Patent & Trademark Office (USPTO). In 2013 he was named to the Board of Co-Editors of the *Journal of Economics and Management Strategy*. Dr. Graham is a licensed attorney, admitted to practice law in New York State, and is honored to continue serving the United States as a Special Advisor to the USPTO and the US Department of Commerce. Dr. Graham has served as an economic expert to the World Economic Forum, the European Commission, the Japan Fair Trade Commission, the European Patent Office,

Industry Canada, and the Organization for Economic Cooperation and Development (OECD). His honors include winning the Intel Foundation's Robert N. Noyce Fellowship for academic research and being named a Gottfried Leibniz Fellow in Industrial Economics in Germany (Blue List).

Dr. Graham received his PhD from the University of California, Berkeley, and holds other advanced degrees in Law (JD), Business (MBA), and Information Systems (MA).

Paul Grewal

Paul S. Grewal recently joined Facebook as the company's vice president and deputy general counsel. Mr. Grewal is a former magistrate judge appointed in 2010 to the United States District Court for the Northern District of California. He presided over and settled criminal and civil cases in a wide range of subject areas, including patent, employment, civil rights, commercial contract, trademark, and federal misdemeanor cases. He served as a member of the court's Technology Practice and Patent Local Rules Committees.

After graduating from law school, Mr. Grewal served as a law clerk to the Honorable Sam H. Bell of the United States District Court for the Northern District of Ohio. After working on complex commercial litigation at Pillsbury Madison & Sutro, he served as a law clerk to the Honorable Arthur J. Gajarsa of the United States Court of Appeals for the Federal Circuit. Mr. Grewal then joined Day Casebeer Batchelder & Madrid (which later merged with Howrey LLP), where he was elected partner and served on the firm's management committee. His practice was focused on intellectual property litigation, with a focus on patent trials and appeals. Mr. Grewal is a former President of the South Asian Bar of Northern California and the North American South Asian Bar Association.

Mr. Grewal received his B.S. in Civil and Environmental Engineering from Massachusetts Institute of Technology in 1993 and received his J.D. from the University of Chicago in 1996.

Brian Hanlon

Brian E. Hanlon is the Director of the Office of Patent Legal Administration (OPLA) at the United States Patent and Trademark Office (USPTO). Prior to taking his current position, Mr. Hanlon served as the acting Chief of Staff for Under Secretary of Commerce for Intellectual Property and Director of the USPTO, David J. Kappos, and served as the Director of Strategic Planning and Management Council for Under Secretary and Director Jon W. Dudas and acting Under Secretary and Director John J. Doll. Prior to his work in the Under Secretary's Office, Mr. Hanlon was the Deputy Director of OPLA. Mr. Hanlon was also a shareholder at the law firm of Banner & Witcoff, Ltd. where his practice focused on patent prosecution and client counseling on issues relating to both procurement and enforcement of utility and design patents.

Mr. Hanlon began his career as a patent examiner at the USPTO in former Group 3300, now TC 3700. He received a Bachelor of Science in Mechanical Engineering with Honors from Worcester Polytechnic Institute, and a J.D., Magna Cum Laude, from the Catholic University of America, Columbus School of Law. Mr. Hanlon is a member of the Bars of Maryland, the District of Columbia, and the United States Supreme Court.

Jack Harvey

Jack Harvey is the Assistant Deputy Commissioner for Patent Operations overseeing the areas of communications, transportation, construction, agriculture, e-commerce and national security.

Mr. Harvey joined the USPTO as a patent examiner after receiving a Bachelor of Science degree in Electrical Engineering from Clarkson University. He examined applications in the electrical area and served as a Supervisory Patent Examiner in the areas of Computer Measuring and Testing, Computer Architecture and Computer Networking. He also served as a Quality Assurance Specialist in related fields and e-commerce. Mr. Harvey was appointed to the Senior Executive Service, and over the past 10 years he has served in the capacity of Director in four Technology Centers including the Database, Computer Networking and Semiconductor technologies.

The Honorable Paul Michel

Judge Michel received a B.A. in 1963 from Williams College and a J.D. in 1966 from the University of Virginia. He was admitted to practice in Pennsylvania in 1967, in U.S. district court in 1968, in U.S. circuit court and before the U.S. Supreme Court in 1969.

Judge Michel was assistant district attorney in the Office of the Deputy District Attorney for Investigations in Philadelphia from 1966 to 1974, as well as a Second Lieutenant in the United States Army Reserve from 1966 to 1972. From 1974 to 1975 he was the Assistant Watergate Special Prosecutor, and from 1975 to 1976 was assistant counsel to the United States Senate Select Committee on Intelligence. He then became the deputy chief and Koreagate prosecutor for the Public Integrity Section of the United States Department of Justice from 1976 to 1978.

Judge Michel became the associate deputy U.S. attorney general in 1978, and in 1981 became counsel and administrative assistant to U.S. Senator Arlen Specter until his judicial appointment. He has also been adjunct faculty at the George Washington University Law School and John Marshall Law School since 1991.

Judge Michel was nominated to the Federal Circuit by President Ronald Reagan on December 19, 1987 to fill a seat vacated by Judge Phillip Benjamin Baldwin. The Senate confirmed Michel's nomination on February 29, 1988, and he assumed the office on March 8, 1988.

Judge Michel retired on May 31, 2010. Judge Randall Ray Rader succeeded him as chief judge.

Charles Molster

Charles B. Molster, III of the Law Offices of Charles B. Molster, PLLC (formerly a recent partner at Winston & Strawn LLP) has had extensive experience as a trial lawyer handling complex litigation matters in federal and state courts around the country, and has also provided extensive outside general counsel services to various corporate and other clients. Mr. Molster's litigation experience includes the following practice areas: complex commercial litigation, patent infringement litigation, patent infringement mediation, corporate governance/shareholder, employment, securities, trade secrets, trademark and copyright, antitrust litigation, merger and acquisition, and alternative dispute resolution. He has

also worked on numerous corporate representations regarding stock purchase agreements, asset purchase agreements, shareholder agreements, Engineering, Procurement and Construction (EPC) contracts, employment agreements, joint venture agreements, Board of Director resolutions, and numerous other contracts and corporate documentation issues. Additionally, Mr. Molster regularly conducts CLE programs and other educational presentations relating to various legal issues and is the Current President of the Northern Virginia Chapter of the Federal Bar Association.

Mr. Molster received his B.A. from the University of Virginia in 1979 and his J.D. from the University of Richmond School of Law in 1983.

The Honorable S. Jay Plager

S. Jay Plager was appointed Circuit Judge by President George H. W. Bush in 1989. Prior to his appointment, Judge Plager served in the Executive Office of the President from 1987 to 1989, as Associate Director of OMB and as Administrator, OIRA. He also served as Counselor to the Under Secretary, Department of Health and Human Services from 1986 to 1987.

Judge Plager was Dean and Professor at the Indiana University School of Law from 1977 to 1984. He was Professor, Faculty of Law, at the University of Illinois from 1964 to 1977, and from 1958 to 1964 he was Professor, Faculty of Law, at University of Florida. Judge Plager was Visiting Scholar at Stanford University Law School from 1984 to 1985, Visiting Fellow at Trinity College, Visiting Professor at Cambridge University in 1980, and Visiting Research Professor of Law at the University of Wisconsin from 1967 to 1968.

Judge Plager served on active duty in the United States Navy during the Korean Conflict. He grew up in New Jersey, where he attended public schools and, in 1952, he received an A.B. degree from the University of North Carolina. Judge Plager received a J.D. in 1958 from the University of Florida, with high honors, where he was editor-in-chief of the Florida Law Review, and in 1961 an LL.M. from Columbia University. Judge Plager assumed senior status in 2000.

Mark Powell

Mark Powell is the Deputy Commissioner for International Patent Cooperation for the United States Patent and Trademark Office. In this recently created, senior position, Mr. Powell leads international cooperative efforts with an aim to improve the international patent system in terms of certainty and cost reduction for intellectual property stakeholders, work-sharing, improvements to the PCT system, and other harmonization matters. Prior to holding this position, Mr. Powell served as Special Advisor to the Commissioner for International Patent Cooperation Matters.

Mr. Powell began work at the USPTO in 1986 as a patent examiner in the area of high energy physics, and became a senior examiner in high-definition television technology. In 1994, he became a supervisory examiner in what is now the main IT examining sector at the USPTO overseeing user-interface, artificial intelligence, source-code management, and computer graphics examination units. Mr. Powell served as a Technology Center Director from 2003-2011 in the telecommunications area, managing some 1,200 patent examiners, all while participating in international patent matters on behalf of the agency.

Mr. Powell holds a B.S.E.E from Clemson University and a Certificate in Advanced Public Administration from the Maxwell School of Citizenship and Public Affairs at Syracuse University.

Arti Rai

Arti Rai, Elvin R. Latty Professor of Law and co-Director, Duke Law Center for Innovation Policy, is an internationally recognized expert in intellectual property (IP) law, innovation policy, and administrative law. Professor Rai has also taught at Harvard, Yale, and the University of Pennsylvania Law Schools. Professor Rai has numerous publications which have appeared in both peer-reviewed journals and law reviews, including *Science*, the *New England Journal of Medicine*, the *Journal of Legal Studies*, *Nature Biotechnology*, and the *Columbia, Georgetown, and Northwestern law reviews*. She is the editor of *Intellectual Property Law and Biotechnology: Critical Concepts* (Edward Elgar, 2011).

From 2009-2010, Professor Rai served as the Administrator of the Office of External Affairs at the U.S. Patent and Trademark Office (USPTO). Prior to that time,

she had served on President-Elect Obama's transition team reviewing the USPTO. Prior to entering academia, Professor Rai clerked for the Honorable Marilyn Hall Patel of the U.S. District Court for the Northern District of California; was a litigation associate at Jenner & Block; and was a litigator at the Federal Programs Branch of the U.S. Department of Justice's Civil Division. Professor Rai is a member of the National Advisory Council for Human Genome Research, a public member of the Administrative Conference of the United States, and a member of the American Law Institute.

Professor Rai graduated from Harvard College, magna cum laude, with a degree in Biochemistry and History (history and science), attended Harvard Medical School for the 1987-1988 academic year, and received her J.D., cum laude, from Harvard Law School in 1991.

Vera Ranieri

Vera Ranieri is a Staff Attorney on the Electronic Frontier Foundation's intellectual property team, focusing on patent reform. Prior to joining EFF, Vera practiced at Greenberg Traurig, LLP, where she worked primarily in patent litigation, representing clients against trolls. Vera has a B.S. in Mathematics from Mount Allison University in Sackville, New Brunswick, Canada, where she realized too late that she should have gotten a degree in Computer Science, and a J.D. from Harvard Law School. In her spare time, Vera loves exploring the wonderful food scene of San Francisco.

Martin Rater

Martin (Marty) Rater is the Chief Statistician and Acting Director of the Office of Patent Quality Assurance. Mr. Rater joined the USPTO in 2000 as part of the Office of Quality Management and Training where he led efforts related to customer and employee surveys and provided statistical consultation for both the Patents and Trademarks quality review programs. In 2004, Mr. Rater transferred to the Office of Patent Quality Assurance (OPQA) and today oversees several aspects of the quality review program such as sample design, review methodology, and reporting of quality metrics. Mr. Rater also oversees OPQA's ISO 9001-certified quality management system and serves on several teams tasked with evaluating program effectiveness, primarily focusing on impacts to quality and production. Prior to joining the USPTO, Mr. Rater worked as a consultant designing

program evaluations and providing data analysis and survey expertise to Federal agencies and Fortune 500 companies. Upon graduation from the University of Georgia in 1990, Mr. Rater began his career working for USDA, conducting surveys and data analyses related to the estimation of crop and livestock production.

Kevin Rhodes

Kevin Rhodes is the President and Chief Intellectual Property Counsel of 3M Innovative Properties Company in St. Paul, Minnesota, where he is responsible for managing the intellectual property assets of 3M Company and its worldwide affiliates.

Mr. Rhodes is President of the Intellectual Property Owner's Association, and serves on the Board of Directors of the Intellectual Property Owner's Education Foundation. He also chairs the Board of Advisors of the William Mitchell College of Law Intellectual Property Institute. He has spoken widely on issues of intellectual property law and policy.

Mr. Rhodes joined 3M in 2001. Prior to joining 3M, Mr. Rhodes was a partner at Kirkland & Ellis in Chicago, where he specialized in intellectual property litigation.

Mr. Rhodes received his J.D., magna cum laude, from Northwestern University. Mr. Rhodes is a registered patent attorney, with an undergraduate degree in Chemistry from Grinnell College.

Hans Sauer

Hans Sauer is Deputy General Counsel for Intellectual Property for the Biotechnology Industry Organization, a major trade association representing over 1,100 biotechnology companies from the medical, agricultural, environmental and industrial sectors in the United States and 31 other countries. At BIO, Dr. Sauer advises the organization's board of directors, amicus committee, and various staff committees on patent and other intellectual property-related matters.

Prior to taking his current position at BIO in 2006, he was Chief Patent Counsel for MGI Pharma, Inc. in Bloomington MN, and Senior Patent Counsel for Guilford Pharmaceuticals Inc. in Baltimore, MD. Hans has 18 years of in-house experience in the biotechnology industry, first as a research scientist and later as a lawyer. His scientific work was in the area of age-related neurological disorders; after becoming a lawyer he worked on several

drug development programs, being responsible for patent prosecution and portfolio oversight, clinical trial health information privacy, and sales and marketing legal compliance.

He did his postdoc at Genentech in South San Francisco, and holds a M.S. degree from the University of Ulm in his native Germany; a Ph.D. in Neuroscience from the University of Lund, Sweden; and a J.D. degree from Georgetown University, where he serves as adjunct professor.

Alfred Spigarelli

Alfred Spigarelli worked as a patent agent in the industry before he joined the European Patent Office (EPO) as an examiner working mostly in Munich. In 2004 he was appointed Director in the electrical and semi-conductor technology at The Hague. In 2008, he left the operation side to create the Patent Procedures Management department, which quickly became a central department in the EPO for all patent practice and procedural issues. Since 2000, he has been directly involved in the definition of the EPO policy under both PCT and EPC.

In February 2016 Mr. Spigarelli was nominated Director of Quality Support and he has just been appointed Principal Director of Quality Management (PDQM) where he is responsible for the overall running of the quality management system at the EPO. This implies development and maintenance of quality services provided by examiners and formality officers, coordination of the different operational quality control mechanisms in place at EPO, and tracking corrective and preventive actions. PDQM is also responsible for managing external complaints, users' feedback office-wide, advising the organization on strategic quality issues as well as for coordinating the User Satisfaction Surveys. PDQM assesses whether EPO is meeting its quality objectives and customer expectations, thereby providing a direct evaluation of the EPO's quality performance. PDQM paves the way for continual improvement in their operations and makes it easier to identify non-conformities and areas for improvement.

Mr. Spigarelli received his diploma in Electro-Mechanical Engineering. He also graduated in Patent Law from the Center for International Intellectual Property Studies (CEIPI) in Strasburg and has passed the EQE.

Mark Vallone

Mark Vallone is Lead IP Counsel of IBM's Cognitive Engagement business unit, for which he leads transactions, product support, defensive analysis of third party patents, and U.S. patent procurement operations. He additionally leads U.S. patent procurement operations for IBM's Cloud, Global Technology Services, Global Business Services, and Sales & Distribution business units. Mr. Vallone formerly led the team responsible for IBM's U.S. Patent Procedures manual followed by all IBM's in-house and outside counsels, and he continues to actively participate in patent policy related matters for the company.

Mr. Vallone received his B.S. in Computer Science from The Pennsylvania State University in 1998, after which he spent five years as a software developer for IBM in the areas of network security, distributed computing, and e-commerce. He received his J.D., summa cum laude, from Syracuse University in 2006. He is a registered to practice before the U.S. Patent and Trademark Office and is a member of the New York State Bar.

Greg Vidovich

Greg Vidovich was recently named the Associate Commissioner for Patent Quality. Prior to being named to this position, Mr. Vidovich was a Director in Technology Center 3600. As a Technology Center Director, Mr. Vidovich managed in the Business Methods area. He has been instrumental in providing numerous training events to examiners across the corps to improve clarity in Office actions. Mr. Vidovich led: interim guidance and three workshop style training events dealing with 35 USC 101; a training lecture and workshop style training on 35 USC 112(b); multiple training lectures dealing with 35 USC 112(f), and a training lecture and workshop style training dealing with 35 USC 112(a). Mr. Vidovich has also worked on projects under the Enhanced Patent Quality Initiative (EPQI) focused on improving clarity and reasoning in Office actions. Other projects included implementation of HR Connect to Patents, IT changes to an Office action form to improve clarity, IT changes to improve tools for managers, and new examiner search tools.

Prior to being selected as a Director in January 2012, Mr. Vidovich held a variety of positions in the Office. He first became a Supervisory Patent Examiner in Technology Center 3700. He later became a Quality Assurance Specialist in Technology Center 3700. He then went to the Office of Patent Training as a Class Manager in the Patent Training Academy which focused on the training of new examiners. He later went to the Office of Patent Information Management (OPIM) where he led the Search Team & Data Division which worked on the examiner search systems in the Office. He also developed management systems to substantially automate many of the processes performed by over 600 managers in areas such as performance reviews and ratings, awards, and promotions for over 8,000 examiners. During this time, he also was on a team which helped develop the first Regional Office in Detroit as well as worked on projects with the IP5 international intellectual property community.

Mr. Vidovich received a B.S. in Mechanical Engineering from Penn State and started his career in the Office over 23 years ago.

Saurabh Vishnubhakat

Saurabh Vishnubhakat is an associate professor of law and an associate professor of engineering at the Texas A&M University. He is also a fellow at the Duke Law Center for Innovation Policy. He writes and teaches on intellectual property law, civil procedure, and administrative law, particularly from an empirical perspective. Professor Vishnubhakat was previously a faculty fellow at Duke Law School, where he co-taught patent law, and began his career as a legal advisor at the United States Patent and Trademark Office, where he counseled the agency's first two chief economists on IP law and policy.

Professor Vishnubhakat holds both a J.D. and LL.M. in Intellectual Property Law from the University of New Hampshire School of Law (formerly the Franklin Pierce Law Center) and a B.S. in Biochemistry from the Georgia Institute of Technology.

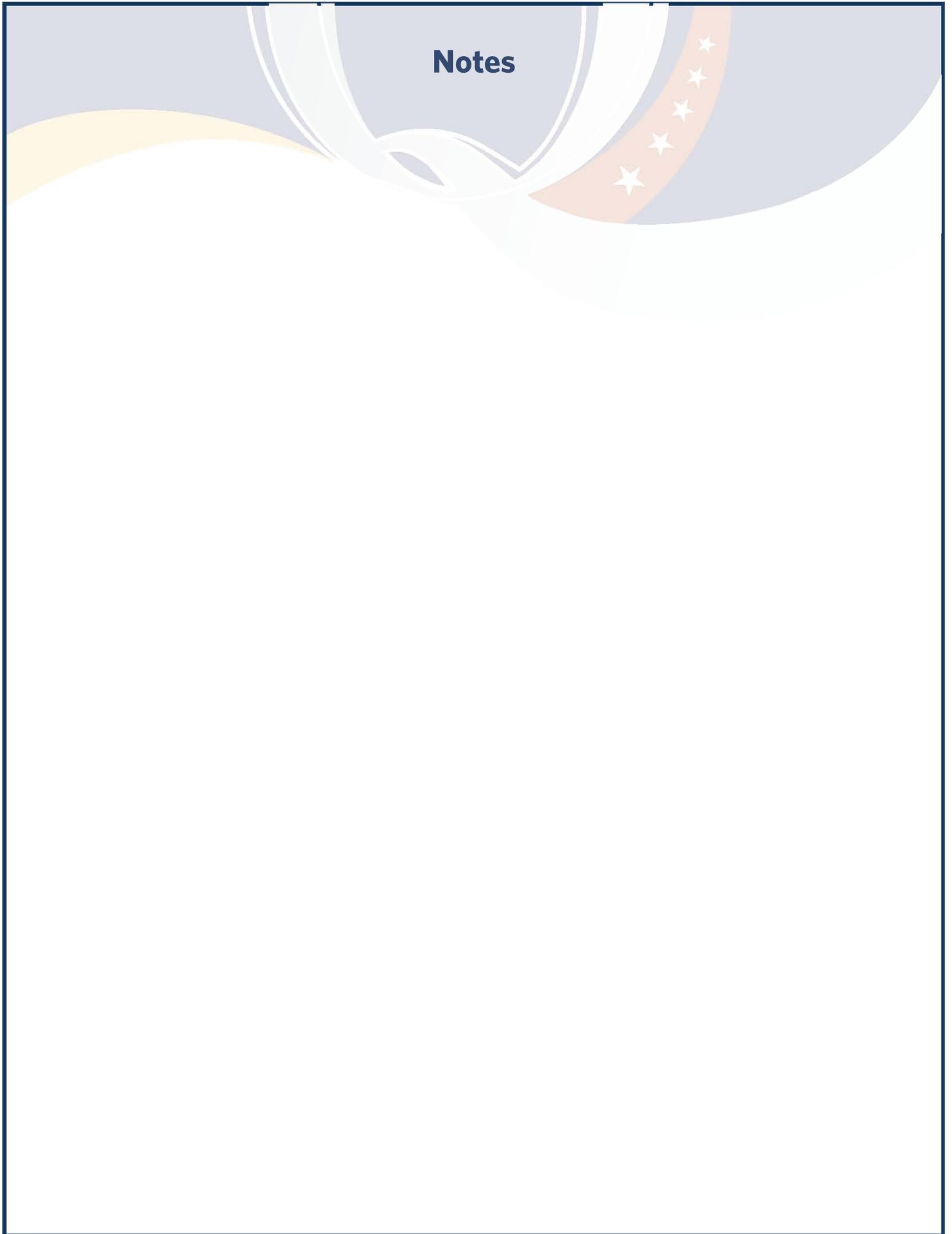
Valencia Martin Wallace

Valencia Martin Wallace is Deputy Commissioner for Patent Quality. She was appointed to this newly-created position in January 2015. In her role as Deputy Commissioner for Patent Quality, Ms. Martin Wallace manages and leads the Patents organization's quality initiatives. She is responsible for improving the high quality of the USPTO's patent examination processes and products by implementing and maintaining a comprehensive quality management system.

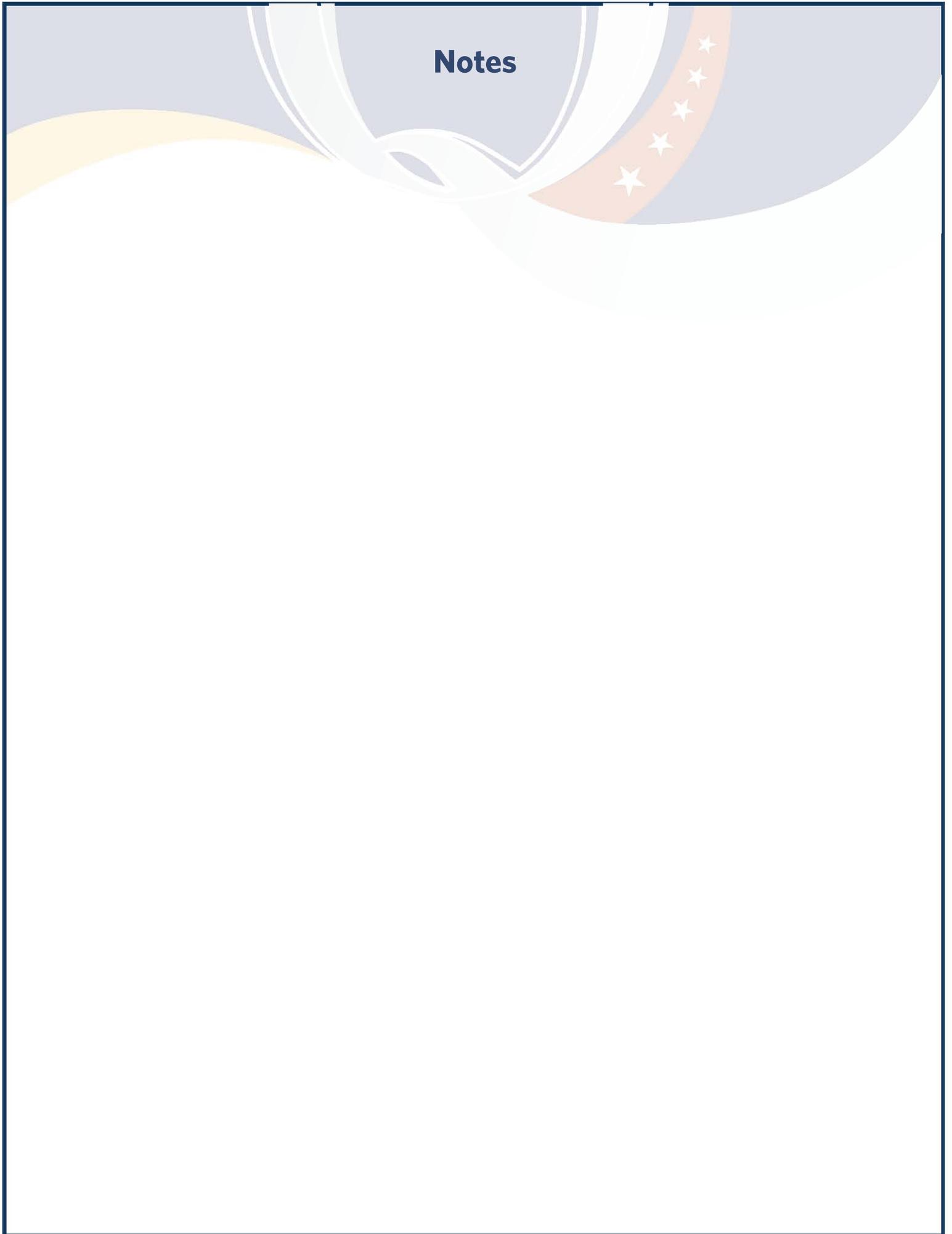
As part of her twenty-two year career at the USPTO, Ms. Martin Wallace recently served as Assistant Deputy Commissioner (ADC) for Patent Operations from 2011-2015. In the position, she oversaw operations in the software Technology Centers, served as executive co-lead on the implementation of the AIA First Inventor to File statutory framework, and led the development and implementation of the Office of Patent Examination Support Services, which centralized the technical support staff in a manner that allowed for greater efficiency and effectiveness.

Ms. Martin Wallace is a graduate of Howard University, where she earned a Bachelor of Science in Electrical Engineering; and The George Washington University School of Law, where she earned a Juris Doctorate. She has also received a certificate in Advanced Public Administration from Syracuse University's Maxwell School of Public Administration.

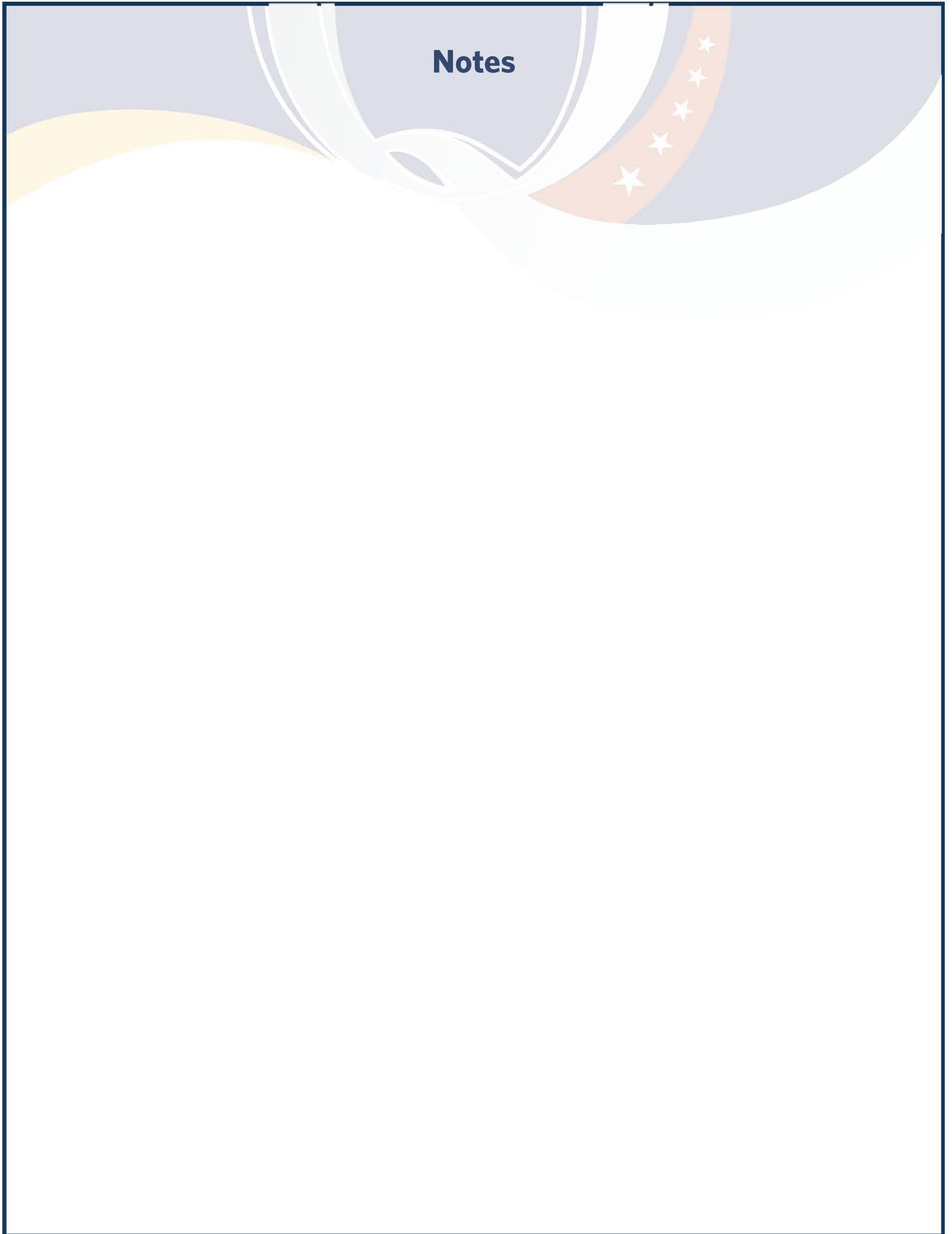
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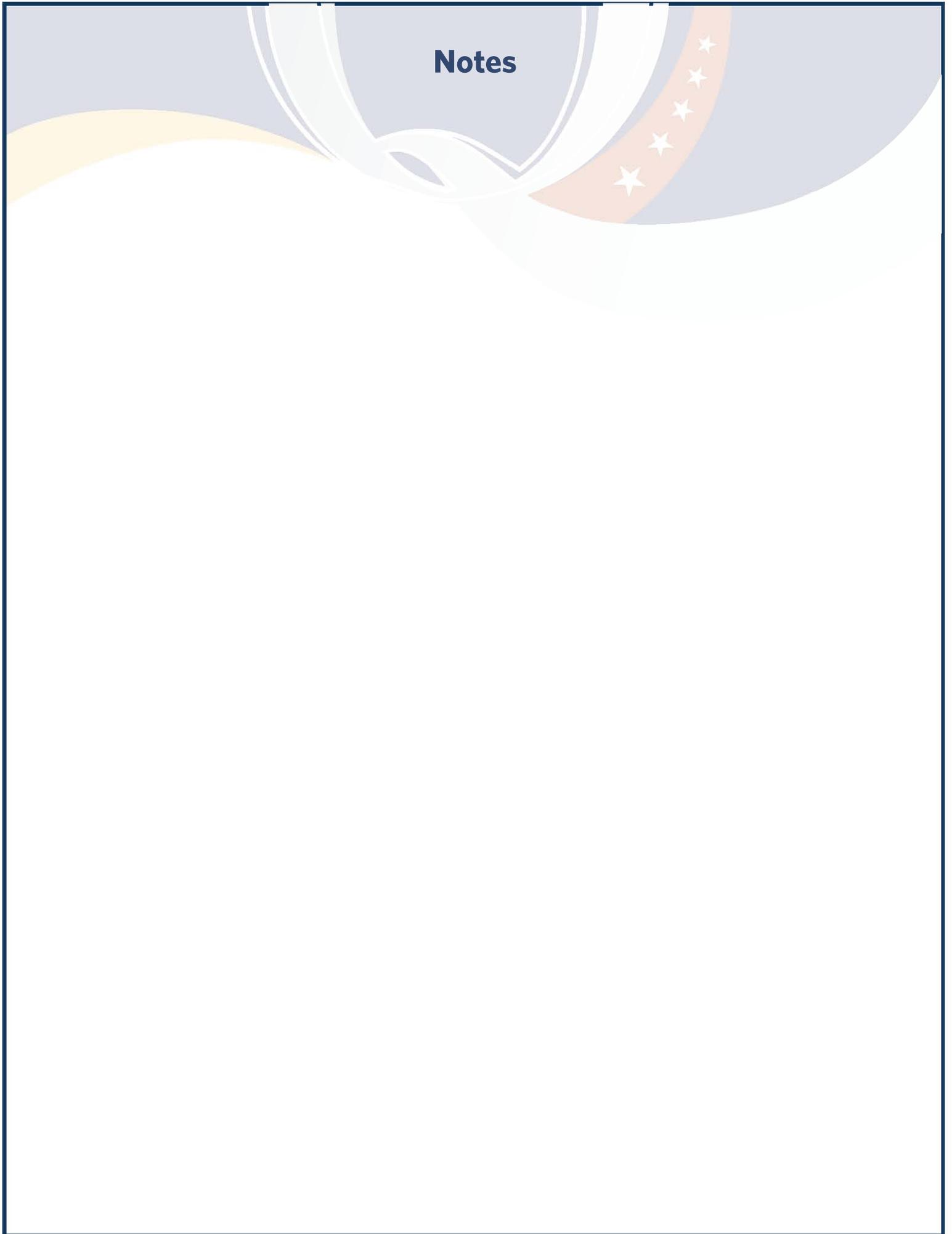
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Upcoming Events

Stakeholder Training on Examination Practice and Procedure (STEPP)

Website: <https://www.uspto.gov/patent/initiatives/stakeholder-training-examination-practice-and-procedure-stepp#step1>

Training delivered through STEPP is designed to provide external stakeholders with a better understanding of how and why an examiner makes decisions while examining a patent application. The STEPP program is administered by the Office of Patent Training (OPT) and consists of in-person courses based on material developed for training employees of the USPTO. Currently the 3-day STEPP session is free to attend. If you are interested in attending one of the following sessions, please visit the STEPP website (link above) to learn more about registering.

| Dates | Location |
|-----------------------|---|
| January 10-12, 2017 | Dallas, TX – Texas Regional Office |
| March 14-16, 2017 | San Jose, CA – Silicon Valley Regional Office |
| May 9-11, 2017 | Denver, CO – Rocky Mountain Regional Office |
| July 11-13, 2017 | Alexandria, VA Campus |
| September 19-21, 2017 | Detroit, MI – Midwest Regional Office |

Examination Time Analysis (ETA) External Outreach

Website: <https://www.uspto.gov/patent/initiatives/eta-external-outreach>

The USPTO is soliciting public feedback in an effort to conduct a comprehensive study of examination time. The overall effort is called the Examination Time Analysis (ETA).

Examination time goals vary by technology and represent the average amount of time that a patent examiner is expected to spend examining a patent application in a particular technology. The Office plans to use the public feedback as an input to help ensure that the Office's examination time goals accurately reflect the amount of time needed by examiners to conduct quality examination in a manner that responds to stakeholders' interests.

A final interactive roundtable will be conducted in San Jose, California on January 11, 2017. To attend, you must register by January 4, 2017. For more information about how to provide feedback and to register for the roundtable, please visit the ETA website (link above).

The Different Types of Patent Applications

Mon, January 23, 2017 | 11:00 AM – 12:00 PM EST | Webinar

Register at: <https://www.eventbrite.com/e/the-different-types-of-patent-applications-tickets-29490635284>

Are you an inventor looking to protect your idea but unsure of which application to file? Then join us as we go over the differences between Utility and Design Patent applications and the advantages of filing a Provisional and/or Non Provisional Utility Patent Application. We will also go over the different forms, fees, and formalities required for the respective type of application. This interactive presentation will allow online users to send questions via the chat function to have them answered live! For Registration assistance contact oidevents@uspto.gov

Patent Basics and Resources for Inventors

Fri, January 27, 2017 | 8:30 AM – 12:00 PM EST | USPTO Headquarters - 600 Dulany Street, Alexandria, VA 22314

Register at: <https://www.eventbrite.com/e/patent-basics-and-resources-for-inventors-tickets-29454681746>

Are you an independent inventor trying to get more information on the patenting process? Join us for this free training and opportunity to learn the basics and meet with examiners to help answer your questions about your ideas. For Registration assistance contact oidevents@uspto.gov

Training Resources

Entry-Level Examiner Training Materials: <https://www.uspto.gov/learning-and-resources/examiner-training-materials>

Examination Guidance and Training Materials: <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/examination-guidance-and-training-materials>