Chairman Tillis, Ranking Member Coons, and Members of the Subcommittee,

Thank you for the opportunity to appear before you today. The Copyright Office is pleased to provide additional updates on the Office’s modernization activities since Register Temple’s testimony this past summer. The Copyright Office has fully embraced modernization of our operations and technological systems. Indeed, modernization remains the Copyright Office’s top priority, touching on all aspects of the Office’s activities.

The current fiscal year (2020) is a critical one for the Copyright Office’s modernization efforts, with three separate software development work streams for the Enterprise Copyright System (“ECS”), all proceeding in parallel. In the last year, we have carefully prepared for this increased activity, undertaking a number of important planning and analysis steps. This includes: obtaining multiple independent reviews of our various workflows and business processes; reviewing our personnel and staffing needs; launching initiatives to identify the specific features we would like in the new system; and focusing on change management efforts to engage and empower staff.

We have also laid the groundwork for modernization by significantly improving our day-to-day operations. In the past year alone, the Copyright Office completely eliminated the backlog of pending registration claims, reduced registration processing times by more than 40%, and completely resolved all older claims pending since 2017. Additionally, the Copyright Office drafted a number of revised regulations to streamline registration practices and procedures. The Copyright Office also recently completed an independent analysis of its recordation processes and began more targeted efforts to reduce the existing recordation backlog.

Throughout this foundational work, we have prioritized the public’s need to understand, and participate in, the modernization process. The Office is committed to engaging with the entire

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copyright community, whether individual artists and creators, major corporations, or general users of the system, to ensure that our modernization efforts accurately reflect the expectations of the public and the needs of the digital age. We launched a significant online presence to explain modernization and seek feedback from the public. This included creating a modernization website, a dedicated email account for the public to use to ask questions and provide suggestions, and a bimonthly webinar series focusing on modernization issues. These online efforts supplemented our other communication vehicles, including notices of inquiry on both recordation and registration modernization and numerous modernization presentations in various venues.

In sum, we have made significant strides towards modernization and look forward to continued progress in the coming years. We are collaborating with the Library and will continue to provide them with the business information necessary to develop our new systems, and we will thoroughly analyze and implement the operational advice that we receive through our independent consultations. Copyright Office staff at every level are deeply committed to this effort, and we look forward to providing the subcommittee with updates as the process moves forward.

I. Modernizing the Copyright Office: Technology

Modernizing the Copyright Office will require the combined resources of the Library and the Office. As part of the Library of Congress, which uses a centralized IT model, we rely on the Office of the Chief Information Officer (“OCIO”) for technical services, including system and software development. Our Copyright Modernization Office (“CMO”) works closely with OCIO to communicate the Copyright Office’s business needs, which CMO gathers from the various Copyright Office divisions. With the Copyright Office providing the business needs and the Library providing the technical services, we are working towards modernizing our systems. To further aid in the modernization effort, the Office recently hired a Senior Advisor of Operational Policy and Special Projects to work as an IT advisor, reporting directly to the Register. We are fortunate in that this senior advisor comes from OCIO, and this arrangement will help enhance the existing collaboration between the Copyright Office and OCIO. We want to make sure that the business needs that we have from the Copyright Office are smoothly translated to OCIO as they start doing all of these various development activities.

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2 The CMO was created as part of the Copyright Office, as directed in the joint 2017 Modified Modernization Plan. See LIBRARY OF CONGRESS & U. S. COPYRIGHT OFFICE, MODIFIED U.S. COPYRIGHT OFFICE PROVISIONAL IT MODERNIZATION PLAN: ANALYSIS OF SHARED SERVICES, SUPPORT REQUIREMENTS, AND MODERNIZATION EFFORTS (2017) (“Joint Modified IT Plan”). Among other important roles, CMO analyzes and documents the Office’s needs (including those of the copyright community) and serves as our liaison to OCIO on OCIO’s development activities. CMO and OCIO collaborate closely on IT-related modernization activities.
We appreciate Congress’ assistance with these efforts, including by providing dedicated modernization funding in fiscal year 2019. In fiscal year 2020, we anticipate a number of additional developments, including launching a limited pilot for a new, digital recordation system, and the beginning of development work on the registration and public record replacement systems.

A. Developing an Enterprise Copyright System (“ECS”)

The Copyright Office’s Enterprise Copyright System (“ECS”) will integrate, innovate, and improve all of the Copyright Office’s technology systems. In creating the ECS, the Copyright Office is focused on evaluating the current registration and recordation systems and performing outreach to a cross-section of users to improve the entire process. The new ECS will also improve access to Office records through digitization and will develop a robust, stable system for filing, processing, and searching data related to statutory licensing royalties that the Copyright Office manages on behalf of rightsholders. We look forward to an ECS that will provide a more user-friendly platform for the public to transact services with the Copyright Office, offer streamlined processing internally for faster service delivery, and be easily configurable, flexible, and scalable.

Developing the ECS is not a simple task. It requires close coordination of numerous work streams across the Library and full alignment with the Copyright Office’s business requirements. To best tackle this endeavor, the Copyright Office and the Library are engaging an outside consulting firm to develop a critical path for the full five-year modernization period that will establish development milestones, among other things. The updated timeline will identify dependencies, clearly delineate roles and responsibilities, and coordinate the availability of resources. As mentioned above, the Library handles IT development and other work, and the timeline will help create a plan for how the effort will proceed.

The Copyright Office is confident that we have been—and will continue to be—able to provide the comprehensive business information needed to inform the modernization process. We are casting a wide net to obtain feedback from our staff and the entire copyright community.

3 The Copyright Office requested assistance with developing a critical path, which is a standard planning tool in project management. Recognizing that critical path planning is a Library-wide need, the Library plans to award an agency-wide contract for critical path consulting. The Copyright Office will award the first task order against that contract, which should be in place in the second quarter of fiscal 2020.
1. Public Engagement on Modernization

In fiscal year 2019, the Copyright Office worked with a contractor on a robust user outreach and research initiative focused on capturing and integrating feedback from actual Copyright Office users to inform the design of a user-centric interface for the ECS. Work commenced on a global system design, which will allow for a consistent look and feel across all components of the ECS. With the help of this contractor, we conducted sixty-eight in-depth interviews that yielded more than 2,500 interview notes regarding the user experience from applicants in four cities, and launched an extensive online survey. This process allowed us to, among other things, finalize a click-through presentation of the registration interface, which was tested through independent usability testing with existing participants.

The Copyright Office also issued a broad Notice of Inquiry in October 2018 requesting input on how to improve practices regarding registration of copyright claims in the digital age. We sought input on a variety of issues, including the administrative and substance of the registration application, the utility of the public record, and deposit requirements for registration. We also inquired about possible user interfaces, among other topics.

We made similar outreach efforts regarding the recordation system. In the four-city tour mentioned above, we conducted in-depth interviews with copyright recordation stakeholders and the public. We then conducted twelve usability sessions with users of varying experience levels and reviewed 207 survey responses from frequent users. Public feedback is contributing to the design of an intuitive and easy-to-use interface, as well as dashboards for both Recordation Section staff examiners and supervisors. The technical team is incorporating feedback from this testing in preparation for a planned spring 2020 pilot launch.

During the early stages of modernization, we heard clearly that the public is interested in more information on what modernization encompasses and what work is underway. To address this, we developed a number of outreach methods. We developed a modernization website that has a number of resources, including an explanation of what modernization is, what we are working on, periodic quick fact updates, and a number of background resources such as the Joint Modified IT Plan. We also established a dedicated email address—askcmo@copyright.gov—for the public to use to provide direct feedback to CMO. To provide additional, timely updates, we developed a bimonthly webinar series focused on modernization, which has explored issues such as user experience, recordation, and data management, during which we include a question and answer session. To date, we have held five webinars, reaching hundreds of participants, with another one scheduled for December. A number of senior staff have also conducted modernization presentations in a variety of

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4 Additionally, we issued a Notice of Inquiry and Interim Rule for our recordation modernization, which yielded important comments that we considered carefully. See Modernizing Copyright Recordation Interim Rule, 82 Fed. Reg. 52,213 (Nov. 13, 2017).

5 For more information on our webinar series, visit https://www.copyright.gov/copyright-modernization/webinar/, which includes recordings of the webinars conducted to date. Participants in the webinars include Copyright Office and Library staff familiar with the topics.
environments, including at conferences where we previewed images of potential new user interfaces to participants.

We have also committed to keeping our internal staff engaged and updated on modernization efforts. CMO developed a monthly internal newsletter to detail modernization developments for Office staff and to date has released nineteen issues. CMO has also held eighteen staff outreach activities, including Office “teas” and “drop-in” meetings.

2. Recordation Development

Recordation modernization will enable digital submission of recordation filings, automate many labor-intensive elements of the review process, and enable recordation specialists to more efficiently focus on their core tasks. A new, electronic recordation system will replace the Copyright Office’s current paper-based system. To guide this work, we have recently assigned a dedicated, full-time manager to focus on the upcoming pilot release and future recordation modernization efforts; this staff member is the full-time product owner for recordation modernization. This is in addition to existing staff already working full time on the requirements gathering aspects of the recordation development effort.

OCIO is planning for a limited public release of a pilot version of the system in the first quarter of calendar year 2020. In preparation for this upcoming pilot, twelve users from four different industries participated in usability testing sessions in fall of 2018. OCIO UX designers and Copyright Office product owners prioritized the resulting comments and recommendations. The upcoming pilot will allow the Office to obtain public feedback to guide continuing development and will focus on matters such as: metrics collection and reporting, user-centric interfaces, online filing for basic documents, status tracking and transparency, promotion of self-service features, and improved search capabilities.

The pilot will include external (public-facing) features and internal (staff) features. This will include testing for users to submit and track applications, as well as dashboards for our staff. The pilot is planned to be rolled out in phases throughout fiscal year 2020 into fiscal year 2021. During this time, we will gather user feedback from over eighty participants from more than forty organizations, reflecting a cross-section of users who have expressed interest in participating.

After the planned release of the pilot in spring 2020, we will continue to develop recordation functionality. This will likely include: providing operations and maintenance support for pilot users, developing new feature to move the pilot release towards a first public release, continuing outreach with stakeholders, developing refinements and enhancements based on user feedback, adding new features (such as notices of terminations or other documents), and integrating with additional ECS functionality such as registration and backend workflows.
3. Registration Development

In anticipation of OCIO development activities that will begin this fiscal year, we have been evaluating the features we would like to see in a new registration application. To do this, we engaged with the public and prioritized possible features. In fiscal year 2018, a contractor conducted user outreach to create a prototype for an intuitive user interface and improved user experience. We also created a notional list of business priorities in early 2019, including the replacement of existing applications and identified features needed for a modernized registration system. In addition, we participated in six road-mapping sessions in July and August 2019 to plan the logical progression of developmental stages for registration modernization over the next four years, with an emphasis on the initial development goals for fiscal year 2020.

The Copyright Office provided the results of these efforts to OCIO to assist them in building the registration development plan. OCIO has used this information to initiate a foundational effort for a prototype of an application for a digital, non-fiction literary works. Work on this prototype is scheduled for October 2019 through April 2020, with the intent of providing limited public testing to obtain feedback for the larger registration development effort that will continue through September 2024.

The staff of various divisions of the Registration Policy and Practice unit is heavily involved in this work, in addition to their regular duties to examine registration claims. We have assigned a full-time registration manager to work exclusively on modernization issues.

4. Future Work on Licensing

The Copyright Office collects more than $200 million in royalty fees each year from remitters pursuant to certain statutory licensing requirements of the Copyright Act. At the end of fiscal year 2019, the Office was administering over $1.4 billion of these fees, which are held by the Office on behalf of copyright owners pending distribution orders of the Copyright Royalty Judges.

The systems used to administer these fiduciary funds and account for the oversight of the Statements of Account (“SOA”) processing have been in continuous operation since 1997, and the systems are no longer able to meet the IT security requirements of the Library. As part of the ECS development, a licensing module will be developed to replace the aging SOA examination system and most fiduciary accounting processes will be migrated from a standalone accounting application to the Library’s financial system.

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6 As noted above, this included the four-city tour and extensive outreach in the September 2018 to January 2019 timeframe, focusing on the standard literary, performing arts, motion pictures, and group photographs.
B. The New Public Record System

The Copyright Office is continuing our efforts to digitize and provide enhanced access to all of our public registration and recordation data, including data housed within legacy systems and historical records that are not currently online. In the future, these two separate work-streams (the public record and the historical public records) will be joined together to create a single, publicly-accessible system. We have made steady progress on these initiatives, as described below.

Development of the New Public Record System (Voyager Replacement). Currently, Copyright Office records do not exist comprehensively in one place or in one format. There may be several records for a single work that provide different parts of the work’s history, meaning that these records must be viewed together to get the most complete information. To help unite these types of records, in late fiscal year 2019, OCIO awarded a contract to develop a replacement for the current system with a single, easy to navigate, highly searchable database. By the end of fiscal year 2020, the Office plans to launch a beta public record system based on user-centered design principles that contains the copyright catalog information currently found in Voyager from 1978 to the present, which can be subsequently augmented with additional public data and records. This pilot will offer both a simple search interface and an advanced search interface with a query builder to more easily discover copyright Public Records. The public will be able to filter their search results and share, save, or download public copyright information. Future years will see the inclusion of data from past and current systems, providing improved searchability. The system will facilitate the ability to view relationships between records and to navigate between them. This should include locating submitted chain of title information for copyrighted works and associated files. In sum, the development and deployment of the new Public Record System should provide an enhanced user experience which provides a more complete copyright record.

Virtual Card Catalog. The Copyright Office’s physical Copyright Card Catalog contains records of registrations, renewals, and transfers dating from 1870 through 1977. We have scanned the entire catalog of some 35 million cards, resulting in approximately 41.5 million imaged records. The Virtual Card Catalog (“VCC”) proof of concept makes full-color scans of cards available online for public searching with drawer-level browsing. The third software release of the VCC in March 2019 added the remaining images (1870–1954) and marks the completion of a multi-year digitization process for all Copyright Card Catalog entries, beginning with the time copyright registration was centralized at the Library of Congress in 1870. We will continue development work on the VCC in fiscal year 2020 via a contract for the VCC operations and maintenance. This additional development work will include continued data perfection and additional enhancements (such as index refinement and improve data ingestion), as well as operations and maintenance support. Eventually, this information will be included with the Public Records system.
**Record Books Scanning and Data Perfection.** The Copyright Office, through various contracts and agreements, continues to digitize its collection of paper-based pre-1978 entries from the Copyright Record Books and to capture and perfect related metadata to facilitate online searching. There are over 26,000 bound volumes of original copyright applications (1870–1977), including hand-written ledgers. These pre-1978 records present a unique perspective on creativity in America and abroad. Upon completion of this digitization project, the Copyright Office anticipates that we should be able to provide the copyright community with remote access to records that may better help them determine the status of a pre-1978 copyrighted works.

To ensure that quality standards for the digitized materials are met, we implemented an inter-agency agreement with Federal Research Division (“FRD”) to perform and manage the metadata quality review process for digitized deliverables. The Office is working with OCIO to develop a software tool, DLS Sampler, to provide an efficient metadata quality review processes and to facilitate reporting of digitized deliverables for Record Books and cards. A pilot of the DLS Sampler is targeted for release in the second quarter of fiscal year 2020.

**Digitizing Statements of Account.** The Copyright Office and the Library’s FEDLINK are working together to digitize SOAs submitted to the Office’s Licensing Division from 1978 to 2017, with a goal of including these public records in the future Public Records system. The SOA digitization project is anticipated to be completed in March 2020.

**C. Data Management Initiative**

Data management is also a key component of modernization, allowing Copyright Office data to be used and managed system-wide. Essentially, data management is assessing all of the data we have (e.g., author and title information, geographic information, ownership information), mapping it, and using it together to provide a fuller picture of Copyright Office interdependencies and the information provided by users of the system. We have already begun this work, including finalizing the baseline plan that describes how to define standards and processes, identifying vulnerabilities, making data digitally enabled, and establishing principles for the collection, storage, and analyzation of data. We also procured a business intelligence (“BI”) tool in fiscal year 2019 that will allow for data transparency and data-driven decision making by showcasing processes, identifying bottlenecks and gaps, and relaying key metrics and business related insights. For example, using our data and the BI tool, we could measure upticks in certain types of registrations or determine where most visual works applications are coming from, which could help us target outreach and help people understand copyright and the application process more fully.

When complete, the initiative will serve all in the copyright community—from creators to users to the public at large—to allow them to reap additional benefits from Copyright Office data and information that will be authoritative, easily found, well described, high quality, secure, and managed across the entire enterprise.
I. Modernizing the Copyright Office: Organization, Business Processes, and Culture

As the Copyright Office overhauls our technological systems, we must also evaluate and optimize our organizational structures, processes, and workforce. This is a multi-pronged approach that reviews and evaluates both current processes and workflows in each division and the current organizational structures and culture of the Copyright Office itself. We have engaged outside experts to assist with this review and will continue to do so as modernization progresses. This analysis will produce an engaged, results-oriented professional workforce that has the tools it needs and is organizationally empowered to provide efficient, high-quality services to all. These initiatives are underway, as discussed below.

A. Business Process Reengineering

In fiscal year 2019, the Copyright Office commenced a business process reengineering (“BPR”) effort. BPR allows us to examine our current processes, determine if they are effective, and adopt new methods and processes to reduce operational costs and improve business efficiencies. We engaged a contractor for a one-year performance period, identifying processes for their review. Interviews with the affected divisions have started.

Even before we began the fiscal year 2019 BPR, we contracted with another vendor to look at our processes. In fiscal year 2018, the Copyright Office engaged the services of the Smithsonian Organization and Audience Research (“SOAR”) group to review registration workflows and processes and to provide recommendations for improvements, many of which have been implemented. These efforts, combined with the extensive review and overhaul of registration regulations, practices, and processes that the Copyright Office has undertaken in the past several years, have shown impressive results in reducing registration claim processing times.7 In fiscal year 2019, the Copyright Office again contracted with SOAR to review current recordation workflows and processes and provide recommendations for improvements.

B. Organizational Analysis

In fiscal year 2018, the Copyright Office engaged the Office of Personnel Management’s (“OPM”) Human Resources Solutions to perform an organizational analysis and workload assessment. The first phase of OPM’s work, conducted in fiscal year 2019, involved: an organizational assessment to identify strengths and weaknesses across the organization and provide information about organizational performance and a workload analysis to inform FTE recommendations. OPM delivered a draft of its final report in November 2019, which we are now reviewing. We will use this analysis to better align the Copyright Office with newly automated processes resulting from other aspects of modernization. Going forward, this work

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will help build annual staffing plans, justify staffing budget requests, and engage in succession planning.\(^8\) In addition, we will engage OPM in fiscal year 2020 to conduct an in-depth classification review of supervisory and managerial positions and to perform a succession risk analysis to identify short-term and long-term succession planning concerns.

**C. Organizational Change Management.**

We began an organizational change management ("OCM") effort in fiscal year 2019 to help staff adapt to the changes that modernization will bring. OCM is a process by which we can develop key change management processes and documents, train Copyright Office staff on change management practices, and strategically coach staff on structuring and leading complex business transformation. We have brought in a contractor to assist with developing and replicating an OCM process to help communication and staff buy-in for major modernization initiatives. The contractor will be working with us for a year; this includes training a group of staff called “changemakers” on OCM principles, which staffers will in turn be able to continue working with the rest of the Office staff after the contract is complete.

**D. Records Storage and Space Utilization Study**

**Record Storage:** A new state-of-the-art warehouse will consolidate and improve retrieval request times for deposit copies. Currently, copyright deposits are stored in three locations in two states. The Copyright Office has been working with the Library and the Architect of the Capitol on this initiative and is pleased to report significant progress. To support this move, Copyright Office staff have been working on a multi-year inventory preparedness project to vacate the Landover warehouse and other storage facilities. The opening of the new Interim Cabin Branch Warehouse is targeted for the third quarter of fiscal year 2020, and is scheduled to start receiving collections by the fourth quarter of fiscal year 2020. Looking long-term, the permanent warehouse is targeted for construction in fiscal year 2040 at Fort Meade, Maryland.

**Space Utilization:** The Copyright Office partnered with the Library’s Integrated Support Services unit to conduct a space utilization study to evaluate current and future space needs based on evolving business requirements and processes, with the goal of ensuring that our physical infrastructure is configured to fully support modernization. The Copyright Office has reviewed the final report and is considering next steps.

**III. Update of Modernization Contracting and Budgeting**

The Copyright Office performs its important work on a relatively modest budget. We greatly appreciated congressional support in fiscal year 2019, including support for its priority initiatives such as working towards fulfilling the Modified IT Plan goals, providing the public with online access to historical copyright records, and reducing registration and recordation

\(^8\) Succession planning is especially important in light of the fact that nearly one-third of Copyright Office employees have at least twenty years of federal service, and are thus eligible for retirement over the next several years.
processing times. As the fiscal year 2019 enacted budgets included recurring annual funding for several of the Copyright Office’s most important ongoing initiatives, the Copyright Office’s fiscal year 2020 budget request included only the mandatory pay-related and price level adjustments necessary to maintain the same level of funding support to continue the progress already underway. With the loss of certain fees resulting from the 2018 passage of the Music Modernization Act, combined with the new statutory responsibilities for the Copyright Office pursuant to that legislation, the Copyright Office will need to undertake greater responsibilities with fewer resources and may require additional funding resources from Congress in the coming years.

_Contracting Vehicles for Development._ The Copyright Office takes seriously the request by the House Committee on Appropriations to investigate innovative contracting methods, including possible no-cost contracting solutions, for modernization and development of the ECS. The Copyright Office, in coordination with OCIO, issued a public Request for Information (“RFI”) in May 2018 that asked for comments on creative solutions, including possible no-cost options, for the development of a next-generation ECS. Also in fiscal year 2018, the Copyright Office engaged the General Services Administration’s (“GSA”) 18F for guidance on best practices in contracting for agile projects and received a report on their recommendations.

For fiscal year 2020, the Copyright Office and OCIO are engaging GSA’s Assisted Acquisition Services to leverage their expertise in identifying flexible federal IT contracting options for future modernization development.

_More Flexible Fee Authority._ We would like to take this opportunity to reiterate the Office’s longstanding interest in greater flexibility in the use of its prior-year unobligated fee balances. Such a change would allow the Copyright Office to continue providing services to the public in the event of a lapse in appropriations. Flexibility in management of prior-year balances across budget cycles also could provide for more efficient and cost-effective administration of large, non-recurring projects related to modernization and other capital expenditures. To that end, the Copyright Office looks forward to working with Congress to seek the necessary changes to allow for 20% of the balance available in prior-year fees to be available each year, in addition to appropriated amounts, for obligation without fiscal year limitation and to allow the Office to access prior-year balances to continue operations during a lapse in appropriations.

_Fee Study._ The Copyright Office has completed its latest fee study, after conducting a public process that started in June 2017. On October 16, 2019, the Office presented a final proposed schedule and analysis of fees for Copyright Office services to Congress pursuant to 17

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9 See H.R. 1551, 115th Cong. § 102(e) (2018) (as engrossed by the House of Representatives and Senate) (mandating that the “Register of Copyrights shall engage in public outreach and educational activities”).
U.S.C. § 701(b). By law, the Register may institute the new fees 120 days after the proposed schedule is submitted to Congress, unless Congress enacts a law within the 120-day period stating that it does not approve the schedule. Absent congressional action, the Office expects to promulgate a final rule instituting a change in fees in spring 2020.

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The Copyright Office appreciates the Subcommittee’s continued support as we continue to modernize Office technology and services, as well as operation of the copyright system overall. As Register Temple noted in her July testimony to this Subcommittee, the Copyright Office’s legal, policy, and regulatory activities support a copyright ecosystem that is critical to our cultural and economic well-being. Modernization will support the work of the Copyright Office and those who use our systems for decades to come.

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10 U.S. Copyright Office, Proposed Schedule and Analysis of Copyright Fees To Go Into Effect In Spring 2020 (Oct. 16, 2019), available at https://www.copyright.gov/rulemaking/feestudy2018/proposed-fee-schedule.pdf. Further details on the fee study process, including public comments received, is available at the fee study webpage at https://www.copyright.gov/rulemaking/feestudy2018/.