



THE LIBRARIAN OF CONGRESS

January 7, 2020

The Honorable Thom Tillis
Chairman, Senate Judiciary
Subcommittee on Intellectual Property
113 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Chris Coons
Ranking Member, Senate Judiciary
Subcommittee on Intellectual Property
218 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Tillis and Ranking Member Coons:

Thank you for the opportunity to respond to additional questions related to the December 10, 2019 hearing, "Oversight of Modernization of the United States Copyright Office." My responses to the Subcommittee's questions supplement information provided during the hearing and address additional topics of interest from the Subcommittee.

I look forward to continuing to work with you and your dedicated staff on matters impacting the critical effort to modernize the U.S. Copyright Office, and would be happy to provide further information upon your request.

Sincerely,

A handwritten signature in cursive script that reads "Carla Hayden".

Carla Hayden
Librarian of Congress

Enclosure

Dr. Carla D. Hayden
Librarian of Congress Responses to Questions for the Record
“Oversight of Modernization at the United States Copyright Office”
United States Senate Committee on the Judiciary
Subcommittee on Intellectual Property
December 10, 2019

Chairman Tillis

1. What is the current structure and workflow within the Library as it relates to the Library and Copyright Office and specifically with respect to IT decision making?

With respect to copyright policy, the Library of Congress defers to the copyright expertise of the Register of Copyrights, consistent with historical practice and the Register’s statutory responsibility to advise Congress and provide information and assistance to federal agencies and the Judiciary.

With respect to IT modernization, Congress, in the Consolidated Appropriations Act of FY2017, directed the Copyright Office to work in collaboration with the Library’s Chief Information Officer (CIO) to produce a plan for Office IT modernization, including “potential opportunities for shared efficiencies and cost-savings as well as ways the Library’s CIO Office can support the Copyright Office in its overall modernization efforts.”¹ The result was the “Modified U.S. Copyright Office Provisional IT Modernization Plan,”² which harmonizes the Library and Copyright modernization efforts and describes how Copyright and OCIO will work together under a shared services model. The Modified Provisional IT Modernization Plan established an overall IT modernization strategy for improving Copyright Office user services and set the foundation for a joint effort to develop a future-state version of the Office’s IT system as part of a larger, Office-wide modernization program. Additionally, it created the Copyright Modernization Governance Board, led by the Register and the CIO, to act as the steering committee for Copyright modernization projects and facilitate the close coordination necessary to accomplish a system transformation of this magnitude.

The Library has been working for some time to strengthen its IT governance processes in response to the recommendations and advice of the Government Accountability Office and the Library Inspector General. The Library’s current IT governance structure provides strategic direction at the agency level, while also ensuring IT investments are identified and reviewed by executive management and monitored throughout the investment lifecycle.

¹ Joint Explanatory Statement accompanying P.L. 115-31, the Consolidated Appropriations Act, 2017, <https://www.congress.gov/crec/2017/05/03/CREC-2017-05-03-bk3.pdf>.

² “Modified U.S. Copyright Office Provisional IT Modernization Plan,” <https://www.copyright.gov/reports/itplan/modified-modernization-plan.pdf>(Sept. 2017).

The Library's executive managers, including the Register of Copyrights, participate on the agency's top Technology Strategy Board (TSB) -- the highest level of technology governance where strategic priorities are set. The TSB recommends to the Librarian what strategic investments should be made. The highest priority for modernization efforts is given to projects ordered by Congress. In the case of Copyright IT modernization, their current projects have received dedicated funding from Congress and are therefore high priority IT investments, in addition to the fact that they continue to be a top priority for the Library.

The Copyright Office also has representation on other IT governance bodies that influence software application development, budget planning and execution, and digital strategy. The governance bodies are structured to ensure that Library divisions like the Copyright Office have a leading role in defining the business needs and mission requirements that must be met by Library technology.

A successful modernization effort will require investments in information technology on the technical side and a re-imagining of Copyright Office procedures on the business side. To ensure this happens, frequent engagement exists between the agency's technology professionals and the Copyright Office at every level, from top to bottom and with a clear sense of role and responsibilities. The Copyright Office, with its expertise of both copyright law and its internal systems, supplies its required business features to technology professionals. The CIO's office then uses its expertise to develop technology solutions to support those requested features for the Copyright Office. Program managers and an assigned partner liaison work closely with Copyright Office senior officials on a daily basis to identify specific IT needs and to ensure those needs are met. At the most intimate level, staff from both offices work side-by-side as members of small development teams responsible for building and testing specific system components.

2. You mentioned that you have weekly meetings with the Register and OCIO. How long have these meetings been occurring and what prompted you to hold these meetings? Was there something not being done with respect to modernization that caused you to be having these meetings?

Copyright IT Modernization is a top priority given its complexity, magnitude, and importance to fulfilling the Office's mission. Executive-level communication is essential to ensuring the appropriate leadership management of a large project. For some time, I have held regular monthly meetings with the Chief Information Officer and with the Register of Copyrights to discuss the work of their respective service units. Several months ago, I instituted an additional joint weekly meeting to receive more frequent updates now that modernization projects are well underway and nearing the stage of producing key post-first year deliverables in 2020. These include the expected release a limited recordation pilot in the spring of 2020 and a proof of concept for the public records system in late FY 2020. We will also begin full scale development of the next-generation Registration system later this fiscal year.

3. The Copyright Office has many dedicated public servants with a keen expertise in the legal and administrative needs of the Office and the overall copyright system. Will you continue to rely on the expertise of a Register and the Copyright Office staff in the aspects of Office modernization and administration?

The Library values the dedication and expertise of the Register and the Copyright Office, and in fact, the current approach to modernization specifically relies upon their expertise as the administrators of the national copyright system. As it relates to modernization, the Library is ensuring that the Copyright Office has a leading role in determining the business needs and mission requirements that define its technology projects. Modernization also involves the critical work of updating Copyright Office business processes. To achieve this, the Copyright Office is leading a parallel effort to evaluate and optimize organizational structures and human resources, including specific activities around organizational analysis and redesign, business processes and workflows, and organizational change management.

4. One of the essential functions of the Copyright Office is providing advice to Congress—including this Subcommittee and its staff. Do you agree that the Copyright Office should be able to do this independent of any consultation with the Library even if the advice of the Copyright Office is against the interest of the Library?

Advising Congress on national and international issues relating to copyright and other matters arising under Title 17 is a critical and express statutory function of the Register of Copyrights. The Library's current and longstanding historical practice is to enable the Copyright Office in fulfilling the essential function of providing policy advice to Congress. The Library takes very seriously not impeding the Office's ability to meet this obligation.

5. What changes if any, do you envision making internally to the deposit system and how might this impact sections 407 and 408 of the Copyright Act? As you may have seen, my draft bill calls for a default digital deposit requirement, do you agree that it makes sense to move to a more modern default digital deposit requirement instead of the outdated requirement for physical copies in many cases? If not, what do you propose for Congress to do to address the valid concerns of many creators who do not have a physical copy of a work or do not have access to a physical copy?

The Library appreciates the flexibility of being able to accept digital as well as physical deposits, and already takes advantage of it by accepting digital materials for particular types of works, such as PDFs of newspapers received through group registration processes. Library experts designate a format as best edition not because it is analog or digital, but because that format best meets current user needs and is responsive to the preservation required to make it accessible to future users. For creators who do not have or do not have access to a physical copy, copyright regulations currently provide a special relief mechanism to allow applicants to deposit electronic versions of materials. For other formats that require electronic deposit, such as newspapers, serials, newsletters, contributions to periodicals, digitally created architectural works, secure tests, unpublished work

and certain other categories, the physical requirement no longer exists, and in the case of newspapers, these deposits are used for the Library's collections as well.

However, at this time, a change to a default digital deposit requirement would critically affect our ability to serve some of our largest user groups, either by not meeting their preferences or by denying service altogether. The Library could ingest digital materials in various formats, but currently our systems are able to serve only a small number of formats to onsite-only users. But even with continued technical development that would allow our systems to serve more formats to a larger section of authorized users, some issues would remain. Many of our Library users routinely prefer physical over digital copies. Congressional loans represent about half of our annual usage, and regular contacts with member offices confirm a significant and persistent preference for paper over electronic materials. Other users would no longer receive service. Interlibrary Loan, an important function in that Library serves as a "library of last resort", can only be done with print copies since due to current copyright laws we are unable to loan digital materials to other libraries.

The current system of identification and declaration of best edition formats is shared between the Library and the Copyright Office. The current public process for changing best edition statements is not nimble, and due to the time elapsed since the last change the current statements may not reflect technical realities or user needs. The Library would like to work closely with the Copyright Office to update the best edition statement on a consistent and regular basis.

6. The Library of Congress Inspector General recently released a report detailing the challenges associated with Copyright Office information technology modernization. The Inspector General designated the program as a "top management challenge" and identified a number of issues that need to be addressed in order to ensure modernization is successful. What steps are you taking or going to take to address the Inspector General's concerns and recommendations?

The agency's Inspector General (IG) recently identified the modernization program as a top management challenge because of its complexity, magnitude, and importance to fulfilling the Office's mission. I welcome the IG's guidance, as I believe it will greatly benefit the project as it continues. In fact, we are currently acting upon two valuable suggestions from the IG. We are developing a "critical path" for Copyright modernization that will outline detailed milestones and outcome measures over the span of the modernization effort. This is the first task which will be completed under an agency-wide critical path contract for all Library IT. The critical path will be updated on a rolling basis as milestones are met. The Copyright Office is soliciting assistance from an outside consulting firm to develop an "integrated master schedule" to monitor scope, progress, and accountability across related projects. According to the IG, an integrated master schedule is expected to show the various interdependencies that exist along the modernization program's critical path to ensure that the entire effort operates efficiently.

I have also taken several steps to ensure there is appropriate leadership management of this project, including conducting weekly meetings with the Register of Copyrights and the Chief Information

Officer, and supporting the appointment of a senior technical advisor to help plan and manage Copyright IT modernization. This senior advisor reports directly to the Register and will help enhance the existing collaboration between the Copyright Office and the agency's technical staff.

7. How can the Library and Copyright Office improve the management practices among top executives to ensure there is better programmatic implementation of modernization?

The Library, including the Copyright Office and the Office of the Chief Information Officer, are committed to providing all the necessary resources to ensure this modernization effort is a success. Pursuing the critical path and master schedules described in the previous response will provide top executives and managers additional information related to setting milestones, tracking outcomes, and monitoring project scope, progress, and accountability.

I have made sure that the Library is engaged on Copyright Office modernization at all levels, from ensuring that I directly receive regular updates on project statuses and progress to dedicating resources to the Copyright Modernization Governance Board to ensuring that Copyright Office and technology staff are imbedded and working closely together day-to-day on development and testing teams. Collaborative efforts will continue as modernization goes forward. To aid this, the Copyright Office has hired a former Office of the Chief Information Officer development chief as a senior technical advisor reporting directly to the now Acting Register to help enhance the existing collaboration between the Copyright Office and the agency's technical office.

8. One of the recommendations I was most interested in was ensuring the Copyright Office was the dedicated leader in the development of the modernization system and had the ability to head-up the overall program. Do you agree with that recommendation and what are you doing to ensure the Office is leading and directing the program?

At the direction of Congress, the Copyright Office and the Library's Chief Information Officer (CIO) have worked in collaboration to produce a plan for Office IT modernization. As project implementation and development takes place under this plan, the Library is using an agile methodology, under which the Copyright Office is the business owner. This means that the Copyright Office defines the business functions that its new systems must accomplish and prioritizes the work that is done.

Copyright Office subject-matter-experts and agency technical staff then work together on a day-to-day basis as an integrated team to ensure that the applications are developed to successfully deliver the functionality that the Copyright Office needs. The Copyright Office, with its expertise of both copyright law and its internal systems, provides required business features to the Office of the Chief Information Officer. The Office of the Chief Information Officer then uses its expertise to develop technology solutions to support those features for the Copyright Office. Essentially, the Library is ensuring the Copyright Office has a leading role in determining the business needs and mission requirements under this modern design approach that will result in a custom solution to fully support the Office's complex and unique mission.

9. Register Temple has provided stable and experienced leadership to the Copyright Office, and she is to be commended for her service and her commitment to improving the copyright system. With her departure and the subsequent transition to a new acting and/or permanent Register, it is critical that key initiatives be kept on track. How are you working with the Copyright Office to ensure a seamless transition?

With Register Karyn Temple's departure on January 4, 2020, I have appointed Maria Strong, Associate Register of Copyrights and Director of Policy and International Affairs, to be the acting Register of Copyrights. This appointment began on January 5, and will last until the appointment of a permanent Register. Maria has been a senior counselor in the Copyright Office for nearly a decade and is well known among the stakeholder community, including Members of Congress and their staff. Ms. Strong spent almost two decades in private practice, working on copyright matters, domestic and international. She has worked closely with her colleagues across the divisions in the Copyright Office, and I have enjoyed working with her over the years. I am confident that she can ably guide the office and continue to advance its many ongoing initiatives like modernization while the search for a permanent appointee takes place.

In addition to her policy efforts, former Register Karyn Temple has been instrumental in building a strong, transparent foundation to continue the modernization effort without interruption. The new Acting Register, and the capable staff of the Copyright Office, will continue to work in close collaboration with the Library to improve critical functions and to move forward with delivering a fully modernized Copyright system on time and within budget.

1. How does the Library plan to ensure there is a seamless transition between Register Temple, the Acting Register, and the next permanent Register of the Copyright Office? What specific actions do you plan to take to make the transition as seamless as possible, in both the near and long term?

With Register Karyn Temple's departure on January 4, 2020, I have appointed Maria Strong, Associate Register of Copyrights and Director of Policy and International Affairs, to be the acting Register of Copyrights. This appointment began on January 5, and will last until the appointment of a permanent Register. Maria has been a senior counselor in the Copyright Office for nearly a decade and is well known among the stakeholder community, including Members of Congress and their staff. I am confident that she can ably guide the office and continue to advance its many ongoing initiatives like modernization while the search for a permanent appointee takes place.

2. It's important to have a transparent, open process with respect to hiring the next Register, which takes into account stakeholder feedback. A) Will you take into account copyright community feedback on a new Register, and ensure that there is maximum transparency during the transition to new leadership? If so, how? B) Will you commit to working with stakeholders, including members of Congress and the Senate such as myself, as you search for the best applicant for the Register position, and will you seriously consider their/our input?

Like you, I want to ensure a transparent and open selection process, and that Members of Congress and external stakeholders have the opportunity share their views on the filling of the position. In the most recent briefing for your staff, the Library outlined a multi-stage process that includes: appointing individuals to serve on the Library's hiring panel; contracting with a search firm to help in developing the job criteria for the position, and in identifying potential candidates; posting the position on USAJobs and encouraging a strong and diverse pool of applicants; and evaluating applications and interviewing candidates. I will meet with the applicants recommended by the hiring panel before making a final selection.

It is my intention to provide regular briefings to you and your staff throughout this process, and I hope to have your guidance and advice. As well, the Library will be soliciting the feedback of stakeholders in the copyright community. I welcome your suggestions on individuals and organizations the Library should be consulting with.

3. Given the number of important initiatives before both the Copyright Office and the Library of Congress, it's critical to ensure that mission focus remains in place, even during a time of transition. How will you ensure that the coming transition at the Copyright Office doesn't negatively impact key initiatives that it has underway?

In order to support a seamless transition during this time, I appointed Maria Strong, Director of Policy and International Affairs, to be Acting Register of Copyrights, effective January 5, 2020. With the appointment of Maria Strong as the acting Register of Copyrights, the Office will continue its work under the leadership of a policy expert and senior counselor who has been with the Copyright Office for nearly a decade. Ms. Strong spent almost two decades in private practice, working on copyright matters, domestic and international. She has worked closely with her colleagues across the divisions in the Copyright Office, and I have enjoyed working with her over the years. I am confident she is well positioned to continue to advance the Office's many ongoing initiatives while we undertake the search for a permanent appointee.

I appreciate the leadership Register Temple provided to the Office, and wish her well on her next endeavors. In addition to her policy efforts, former Register Karyn Temple has been instrumental in building a strong, transparent foundation to continue the modernization effort without interruption. The new Acting Register, and the capable staff of the Copyright Office, will continue to work in close collaboration with the Library to improve critical functions and to move forward with delivering a fully modernized Copyright system on time and within budget.

4. The current information technology modernization efforts will have significant implications for the administration of the copyright system. This makes transparency essential. Further, it's critically important that those who rely on copyright are kept informed about your plans and proposals, and also have an opportunity to influence them.
A) Do you agree that transparency and input are important to the IT modernization effort?
B) Will you create a formal process to keep the copyright community up to date and receive its advice? C) **What policies and programs do you plan to implement to foster more transparency and cultivate more stakeholder input with respect to Copyright Office IT modernization?**

The Library strongly values transparency and receiving user feedback. The agency, including the Copyright Office, is deeply engaged in broad, transparent consultation and outreach to facilitate public understanding and engagement. User input and feedback is critical to our development approach.

The Copyright Office has been leading a robust user outreach and research initiative, working with the Office of the Chief Information Officer's user experience design experts. This initiative includes focus groups in cities around the country and a steady stream of information through newsletters and webinars. The Office also has several processes in place to keep the copyright community up to date and receive its advice on modernization. This includes creating a specific modernization information section on Copyright.gov, a dedicated email account for the Copyright Modernization Office (CMO) to receive the public's questions and suggestions (askcmo@copyright.gov), and a bimonthly webinar series focusing on modernization issues. These online efforts supplement other communication vehicles, including formal notices of inquiry on recordation and registration modernization and numerous modernization presentations in various venues. The user input received from these efforts have played and will continue to play an essential role in informing the business needs and mission requirements that must be met by Library technology.

The Library also anticipates providing additional information on IT modernization milestones, similar to what we do for other Library sites, like congress.gov and loc.gov. The Library appreciates the support the subcommittee has expressed for the modernization effort and has been particularly pleased to have additional opportunities to engage with Congress and stakeholders around its execution. The November 2019 Intellectual Property Subcommittee roundtable, for example, provided a welcome opportunity for the then Register of Copyrights and the agency's Chief Information Officer (CIO) to speak directly to interested stakeholders about modernization. The CIO will soon be making himself available for a similar opportunity for information technology (IT) professionals representing various copyright stakeholder groups.

5. As the Library works with the Copyright Office on modernization and IT, it's important to utilize the expertise of the Copyright Office and stakeholders throughout the process, as they know what they need and what works or doesn't work. Do you agree? Will you use Copyright Office and stakeholder expertise in your process?

The Library believes it is critically important to utilize the expertise of the Copyright Office and stakeholders throughout the Copyright Office modernization process. In fact, the current approach to modernization specifically relies upon their expertise as the business owners and administrators of the national copyright system.

Over the past two years, the Library and the Copyright Office have undertaken several significant initiatives to both inform and receive input from public users of the copyright IT system. Such efforts include a User Research and User Experience Design outreach campaign, during which a contractor, joined by Copyright Office and Library IT staff, held focus groups, executed multiple surveys, and conducted targeted demonstrations around the country to collect feedback on how to meet needs of a range of audiences. These efforts yielded input on user expectations and other aspects of system design. Public outreach efforts continue today with iterative design reviews, experience surveys, and usability testing of the modernized services that are in development and planned for future release. The Library of Congress and the Copyright Office are strongly committed to engaging with the entire copyright community and will continue to utilize their feedback as modernization continues.

6. How do you plan to address the September 2019 OIG Report's findings and recommendations?

The agency's Inspector General (IG) recently identified the modernization program as a top management challenge because of its complexity, magnitude, and importance to fulfilling the Office's mission. I welcome the IG's guidance, as I believe it will greatly benefit the project as it continues. In fact, we are currently acting upon two valuable suggestions from the IG. We are developing a "critical path" for Copyright modernization that will outline detailed milestones and outcome measures over the span of the modernization effort. This is the first task which will be completed under an agency-wide critical path contract for all Library IT. The critical path will be updated on a rolling basis as milestones are met. The Copyright Office is soliciting assistance from

an outside consulting firm to develop an “integrated master schedule” to monitor scope, progress, and accountability across related projects. According to the IG, an integrated master schedule is expected to show the various interdependencies that exist along the modernization program’s critical path to ensure that the entire effort operates efficiently.

I have also taken several steps to ensure there is appropriate leadership management of this project, including conducting weekly meetings with the Register of Copyrights and the Chief Information Officer, and supporting the appointment of a senior technical advisor to help plan and manage Copyright IT modernization. This senior advisor reports directly to the Register and will help enhance the existing collaboration between the Copyright Office and the agency’s technical staff.

7. How can the Library and Copyright Office improve the management practices among top executives to ensure there is better programmatic implementation of modernization?

The Library, including the Copyright Office and the Office of the Chief Information Officer, are committed to providing all the necessary resources to ensure this modernization effort is a success. Pursuing the critical path and master schedules described in the previous response will provide top executives and managers additional information related to setting milestones, tracking outcomes, and monitoring project scope, progress, and accountability.

I have made sure that the Library is engaged on Copyright Office modernization at all levels, from ensuring that I directly receive regular updates on project statuses and progress to dedicating resources to the Copyright Modernization Governance Board to ensuring that Copyright Office and technology staff are imbedded and working closely together day-to-day on development and testing teams. Collaborative efforts will continue as modernization goes forward. To aid this, the Copyright Office has hired a former Office of the Chief Information Officer development chief as a senior technical advisor reporting directly to the now Acting Register to help enhance the existing collaboration between the Copyright Office and the agency’s technical office..

Senator Richard Blumenthal*

*The Library of Congress defers to the copyright expertise of the Register of Copyrights, consistent with historical practice. As such, I am providing you with the following response from the U.S. Copyright Office.

1. **As I raised during the hearing, in its 2017 Study on Section 1201 of the DMCA, the Office recommended “that Congress consider expanding the reach of this exemption, easing the strict authorization requirement for researchers and restrictions on the use of information generated from the research, and abandoning or clarifying the multifactor test.” Researchers say they're still afraid to publish their work because of legal threats due to the DMCA's trafficking provision and limitations under the class's scope. The DMCA exemptions provide a valuable protection for good-faith security researchers and I am interested in how to ensure that we remove barriers to protecting our critical information infrastructure while ensuring that the legitimate interests of rights-holders remain protected.**
 - a. **Does the Office continue to believe that Congress should consider expanding the permanent statutory DMCA exemptions related to security testing? If not, why not?**

Yes. As noted in the 2017 policy report, the Office recommends that Congress consider expanding the section 1201(j) exemption “to better accommodate a broader range of legitimate security research, without compromising copyright’s core objectives.” U.S. Copyright Office, *Section 1201 of Title 17*, at 74 (2017), *available at* <https://www.copyright.gov/policy/1201/section-1201-full-report.pdf> (“Section 1201 Report”).

- b. **How might Congress consider easing the “strict authorization requirement for researchers” for the statutory security testing exemption in the 2017 report?**

While the Office has not proposed specific statutory language regarding the authorization requirement, it has noted generally that “past rulemaking exemptions can be helpful in demonstrating alternate ways to address these concerns without imposing a blanket authorization requirement that may stymie the public policy goal of promoting security research.” Section 1201 Report at 77. The current rulemaking exemption for security research requires that circumvention be undertaken *either* on a lawfully acquired device or machine, *or* “on a computer, computer system, or computer network . . . with the authorization of the owner or operator of such computer, computer system, or computer network.” As the Office explained, this framework was adopted in response to stakeholder comments advising the Office that good-faith security research can occur both on consumer-oriented devices within a researcher’s possession, as well as on large-scale structures such as building automation systems, traffic control infrastructure, and cloud computing systems. In former situation, the exemption does not require the researcher to obtain authorization

from the owner of the copyright in the software; circumvention is permitted so long as the device has been “lawfully acquired” and the exemption’s other requirements have been met. In the latter situation, where it is not possible to “acquire” a large-scale computer system, the exemption requires the researcher to obtain the authorization of the owner or operator of the relevant system.

The rulemaking record indicated that this limited authorization requirement is consistent with best practices in the security research field. As the Office noted, researchers “testified that their practice is to obtain advance permission of the building or system owner” when conducting research on those types of structures. U.S. Copyright Office, *Section 1201 Rulemaking: Seventh Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention; Recommendation of the Acting Register of Copyrights*, at 303 (2018), available [at https://cdn.loc.gov/copyright/1201/2018/2018_Section_1201_Acting_Registers_Recommendation.pdf](https://cdn.loc.gov/copyright/1201/2018/2018_Section_1201_Acting_Registers_Recommendation.pdf) (2018) (“2018 Recommendation”). The Office believes that this regulatory framework provides added flexibility to accommodate the legitimate needs of good-faith security researchers, while ensuring that the exemption does not give rise to circumvention by bad actors.

- c. Does the Office believe that, under the “lawfully acquired” limitation in the existing exemption, researchers can permissibly acquire voting machines and other devices for testing even if contracts between device vendors and initial purchasers purport to restrict the resale of the devices?**
 - a. If so, please explain the intent of retaining the “lawfully acquired” limitation?**
 - b. If not, why not?**

Certain participants raised this concern during the 2018 rulemaking, and the Office provided its response at pages 302-303 of the 2018 Recommendation. While the Office cannot advise on specific factual scenarios, it continues to believe that the phrase “lawfully acquired” as used in the exemption “does not require that the circumventing party be the lawful owner of the device,” but “requires only that the acquisition not be in violation of law.” 2018 Recommendation at 303. Therefore, “eligibility for the exemption ‘should not turn on restrictive contractual terms purporting to limit use of the hardware on which the copyrighted software is running.’” *Id.* (citation omitted). Further, the Office expresses no view as to whether any such restrictions on resale would be enforceable, as questions of contract law are outside the scope of the rulemaking.

The Office provided its rationale for retaining the “lawfully acquired” limitation at pages 297-298 of the 2018 Recommendation. The Office noted that this limitation is fundamental to its determination that the research activity covered by the exemption is likely to be fair

use. As the Office explained, “acquiring a device in violation of law would weigh heavily against a fair use finding, as it plainly is conduct that, were it to become widespread, would adversely affect the software copyright owner’s potential market.” *Id.* at 298. Therefore, such activity is not the proper subject of an exemption.

d. Under the 2018 temporary exemption, circumvention should occur “solely for the purpose of good-faith security research.” What limitation is imposed by the inclusion of the word of the “sole” in the exemption?

As noted in the 2018 Recommendation, the phrase “solely for the purpose of good-faith security research” focuses on “the researcher’s purpose at the time of circumvention.” *Id.* at 305. The word “solely” is intended to make clear that the exemption is not available to persons who engage in circumvention for purposes other than good-faith security research, even if such research is one of multiple purposes for which circumvention is undertaken. In response to concerns raised by rulemaking participants, the 2018 Recommendation clarified the Office’s understanding that the term “solely” “is not properly read to prohibit teaching, academic dialogue, or scholarship involving information derived from good-faith security research.” *Id.* at 305. More generally, the inclusion of “solely” is consistent with the language of the permanent exemption under section 1201(j), and the Office “believes it appropriate to track the statutory language to the extent possible, ‘in the interest of adhering to Congress’s basic purpose in section 1201(j).’” *Id.* at 311 (citation omitted).

e. The 2018 temporary exemption requires that good-faith research be conducted “primarily to promote the security or safety of the class of devices or machines.” Would the disclosure of information about a flaw in order to discourage the use of an inherently insecure product fall under the promotion of security or safety? Under what scenarios might publication of security results be unprotected?

The 2018 Recommendation clarified the Office’s understanding that the security research exemption would not prohibit the disclosure of information to discourage the use of an inherently insecure product. The Office concluded that “[i]t would be absurd to construe the exemption to mean that research is protected only if it results in users being able to use the class of devices whose security or safety is being examined.” *Id.* at 309.

With respect to scenarios in which publication might be unprotected, the Office has noted that “[b]ad-faith activities, including irresponsible disclosure, would . . . cause the research to fall outside of the exemption.” U.S. Copyright Office, *Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention; Recommendation of the Acting Register of Copyrights*, at 319 (2015), available at <https://cdn.loc.gov/copyright/1201/2015/registers-recommendation.pdf>. For example, publishing instructions on how to circumvent technological protection measures for the purpose of facilitating piracy by the general public would not be protected. *Cf. Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294, 320 (S.D.N.Y. 2000) (declining to

apply reverse engineering exemption to anti-trafficking provision where record indicated that developers of technology to decrypt DVDs “did not do so solely for the purpose of making a Linux DVD player”).

1. **We have a program in Hawaii called Creative Lab. It includes immersive programs in different creative industries such as writing, directing, producing, animation, music, fashion, and more. Through these programs, individuals are able to refine their creative skills while also learning the business side of being a creator. The ultimate goal of Creative Lab is to grow the burgeoning creative community in the state.**

One of the requirements for people participating in the program is that they register their works with the Copyright Office. I have heard that these creators face difficulties in registering their works, largely because the Copyright Office's online registration process is difficult to navigate and not intuitive.

- a. **What is the Copyright Office doing to make its online registration process more user-friendly? What is the status of that effort?**
- b. **How are you soliciting feedback from users to make sure the next iteration of the online registration process doesn't suffer from the same problems as the current process?**

The following response is provided by the U.S. Copyright Office.

The Copyright Office is keenly aware of the various technological limitations of our current online registration system, eCO (Electronic Copyright Office). Given the outdated nature of the eCO system, both public users as well as Copyright Office staff have been challenged by its limitations. Our Public Information Office handles calls from the public, requesting assistance on using eCO to complete their applications online.

Efforts to modernize the registration have been underway for some time. Indeed, we have 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 Office of General Counsel drafted a number of revised regulations to streamline registration practices and procedures. Modernization draws heavily upon 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.

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.

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 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 issuing a Notice of Inquiry in October 2018 requesting input on how to improve practices regarding registration of copyright claims in the digital age. There we sought input on a variety of issues, including the administrative and substance of the registration application, the utility of the public record, deposit requirements for registration, and possible user interfaces, among other topics.

- 2. Piracy of copyrighted content is a massive problem in this country. As part of the copyright registration process, we ask creators to submit copies of their works. They are asked to submit another, higher-quality copy with the Library of Congress.**

Through the modernization effort, do the Copyright Office and Library of Congress plan to transition these submissions from hard copies to electronic copies? If so, what security measures does the Copyright Office and Library of Congress plan to take to ensure they do not become sources of illicit content and contribute to the piracy problem? And, how are the Copyright Office and Library of Congress balancing security with ease of use?

The following response is a joint answer provided by the U.S. Copyright Office and the Library Office of the Chief Information Officer:

Ensuring the security of the digital content it is entrusted with is a top priority for the Library and the Copyright Office. The Library is responsible for IT security for all its service units, including the Copyright Office. The Library has significantly increased its IT security posture over the last few years. OCIO has implemented NIST security standards, with role based security, to ensure that users only have access to the data they are supposed to see. All Library IT systems have had complete security reviews and are continuously monitored. Regular penetration testing is also conducted against the Library's high value assets. To ensure that data is protected, the Library has built a wide range of IT security processes, tools and dedicated devices into the network, server, and applications used across the agency, and is implementing encryption – at-rest and in-motion – for all sensitive Library data, including e-deposits.

It is important to note that most of these IT security measures are designed to work in the background, with minimal noticeable impact on the ease of use of Library or copyright systems. Where noticeable, like with multifactor authentication, the Library has strived to implement government standard solutions that are easy to use and provide a range of options for use while still ensuring effective security for the network and data.

As the question notes, physical deposit copies are frequently submitted through the registration system. But for certain categories of works,³ the Copyright Office's registration system already securely accepts electronic deposit copies. In the case of newspapers, those copies are also used to satisfy the separate requirement to provide a copy for the Library in its preferred format. In all instances, security concerns are paramount to the Library and Copyright Office. Any future expansion of electronic deposits to additional categories of works will require careful consideration of several factors, including the Library's collection needs, technological capabilities, and security and access issues.⁴ In general, however, the Library and the Copyright Office believe that increased use of electronic copies will be necessary to ensure that a fuller range of creative output is available for registration and Library deposit. The Library and Copyright Office will work collaboratively to offer alternatives that appropriately balance security with ease of use. These kinds of important issues will be addressed using transparent processes that invite public comment and participation.

³ Categories include groups of photographs, serials, newsletters, and contributions to periodicals, digitally created architectural works, unpublished works, or secure tests.

⁴ Section 407 of the Copyright Act states in part that “the owner of copyright or of the exclusive right of publication in a work published in the United States shall deposit [with the U.S. Copyright Office], within three months after the date of such publication—two complete copies of the best edition” “for the use or disposition of the Library of Congress.” 17 U.S.C. § 407. The “best edition” is defined as “the edition, published in the United States at any time before the date of deposit, that the Library of Congress determines to be most suitable for its purposes.” 17 U.S.C. § 101. In most cases, a copyright owner can satisfy the section 407 mandatory deposit requirement by applying to register the copyright under section 408. *See* 17 U.S.C. § 408(b). Section 408 provides that as a general rule, for a published work, a copyright owner applying to register a copyright claim must deposit two complete copies or phonorecords of the best edition with the Copyright Office. Section 408(c) authorizes the Register to issue regulations permitting copyright owners to meet the registration deposit requirement by submitting identifying materials instead of best edition copies, or by submitting only one copy where two would normally be required. Under this authority, the Copyright Office has issued regulations (which require the Library's approval) allowing these alternative forms of deposit for certain categories of works. The Copyright Office has issued circulars providing general information to the public about mandatory deposit and its relationship to registration deposit. These are available on the Copyright Office website. *See* <https://www.copyright.gov/circs/circ07d.pdf> (mandatory deposit); <https://www.copyright.gov/circs/circ07c.pdf> (responding to a mandatory deposit notice).