

Sharalyn J. Laster. Works Created Under Federal Contracts: Copyright and Digital Preservation. A Master's Paper for the M.S. in L.S degree. November, 2007. 45 pages.
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This work surveys the current Federal Depository Library Program treatment of government information in digital formats, and the current state of copyright law as it pertains to digital access and preservation projects, in order to demonstrate potential problems with works created with federal funding that are not considered works for hire and therefore do not fall under the general exemption from copyright protection as enacted in Title 17, Section 105 of the U.S. Code.

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WORKS CREATED UNDER FEDERAL CONTRACTS: COPYRIGHT AND
DIGITAL PRESERVATION

by
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Introduction

As the access and preservation models for government information of all types shift further into the digital realm, new models of partnership between government entities, which produce and distribute information, and libraries and archives, which act as custodians for information, are forming on a variety of scales. Works of the United States government are used by scholars, interest groups, and everyday citizens for a number of purposes, many of which are related to government operations and interactions, and many of which are not. Widespread access to current and historical government information has long been recognized as a priority of the library community.

Digital collections present an obvious solution to many of the problems related to government information. Depending on its mission and user community, a library could work to preserve particular objects that are in danger of disappearing or becoming unusable, increase access to certain collections, or gather materials of interest to various user groups. The process of creating a digital archive includes copying, storage, and redistribution activities which may be at odds with the intellectual property holder's right to reproduce, adapt, distribute, perform, and display the work. For the majority of government information products, which are exempt from copyright protection in the United States, this is not an obstacle of concern.

However, the issues of access to government information and respect for intellectual property intersect in information products that are created with federal

funding by contractors or recipients of government grants. These are works for which an entity holds copyright privileges, but which are in whole or part a product of federal funding; and which reflect activities and needs of government agencies, as well as national scientific, technical, or medical priorities in research.

Part One, “Government Documents and Digital Projects,” will lay out the current depository library program in the United States in light of the challenges posed by the rapidly increasing number of works of the federal government that are born digital, and the growing expectation that all of the information produced by the government should be both easily accessible on the open Web and monitored by one or more trusted custodial institutions. I will describe the current major digital initiative for works of the federal government, as well as criticisms introduced by members of the depository library community. The object will be to show that the depository library system is being thrust, willingly or unwillingly, into a leadership role with respect to government information digital projects.

Part Two, “Copyright and Government-Funded Works,” will introduce the complicating factor of works that are often considered government documents, but are protected by copyright. Here, I will make the argument that the authority federal agencies are granted to determine the specific terms of the intellectual property ownership for federally-funded works results in potential copyright encumbrances which must then be addressed by the instigators of government information digital projects. Although there are no published surveys on the number of works that fall into this category, I will provide an illustrative example.

Part Three, “Copyright and Digital Projects,” will comment on the intersection between copyright law and the needs of non-profit libraries and archives that are creating digital projects that may include print or born-digital materials for preservation purposes. Whether copyright-protected works may be digitally collected and included in a repository without the explicit permission of the copyright holder is an important and unresolved issue. After discussing some of the mechanics of digital reproduction, I will review current thought on fair use and reproduction for preservation purposes as it applies to the digital projects. Finally, I will review some proposals for change to copyright law to help clarify the legal standing of digital projects.

While the current system of handling the intellectual property of government funded works remain in place, the fact remains that objects of genuine public interest have been, and will continue to be, products of the system. I do not argue for the elimination of principles of selection for digital collections of government information, nor for the blanket assumption that because a work somehow arose from a government activity, it must be of lasting value. However, as digital preservation projects expand, and as depository libraries continue to operate both independently and in partnership with government agencies, it is necessary to be aware of the complex landscape that governs the creation of information products for the federal government.

Method and Scope

By reviewing trends in literature on government information products in the United States, and in the current understanding of the legal grounds on which digital preservation initiatives stand, I will shed light on a problem that has not yet been explored in either the library and information science or legal literature: that of potential copyright obstacles for projects that are intended to preserve, organize, and make accessible works created on contract for the U.S. government, particularly projects initiated and maintained in the depository library community.

Throughout this work, I will loosely use the term *government information* to include government publications and documents as well as websites, email newsletters, and other ephemera. Technically, this term encompasses data gathered by both the government and researchers acting on behalf of the government. However, intellectual property regarding data is complicated by the dual nature of data projects: the data itself may be gathered using trade secrets, and its representation or encoding may be separately protected. I will set aside this complicating factor and focus on the other forms of materials, which are more traditionally part of the domain of libraries and archives, and the items one might expect to find in a library online public access catalog.

I will also use the term *digital project* to indicate any project involving the creation, description, and stewardship of digital objects. This may be a digitization project of print materials, or a harvesting and storage project of digital materials, or some

other application of digital librarianship to objects resulting from government activity. The topic of digital preservation is an emerging discipline within the library and information science community, and while it is important to recognize that significant technical challenges remain in the problem of how a digital object can be meaningfully preserved, that issue is outside the scope of this work. Some issues specific to unpublished works and to non-text formats will be mentioned only briefly.

There are two major types of federally-funded works that could produce items of interest to depository library collections. Works created by contractors to the U.S. government have been neglected in research, beyond discussions within the legal community of intellectual property ownership. Because the vast majority of government information products are available without copyright restriction, discussion within the community of government documents librarians and information specialists has understandably focused on the enormous body of material that must be included in the scope of these projects, or on works of the U.S. government that are difficult to obtain, such as Congressional Research Service (CRS) reports.

Although I will briefly discuss issues related to works resulting from grants, the second major type of federal funding that potentially results in copyrighted material, the topic has fortunately received some attention, particularly in the case of federally-funded medical research. There is a general recognition, particularly within the open access (OA) movement, but also in Congress, that this research represents a valuable public asset and should not be locked away within astronomically expensive serial publications any longer than is necessary for publishers to recoup subscription fees from institutions that are able to pay for cutting-edge research. More relevantly, the

preservation of this work is less in question, given the enormous investments the library and medical communities are already making in ensuring long-term access to digital publications.

This work relies on established literature concerning statutory and case law. An analysis of the current legal standing of digital projects containing copyrighted materials is beyond the scope of this project, as is an analysis of federal contracts and grant programs that result in informational products. Finally, I use notes throughout the text to highlight issues that are of secondary importance to my argument. When appropriate, I also use notes to acknowledge a debt to a particular resource, and to make observations on the indicated copyright protection of a few select resources. None of the remarks made in this work should be taken as a legal comment on the actual copyright status of any of these works, nor should any of my interpretations be taken as a comment regarding the actual legality of any particular activity or decision. I am not a lawyer and do not have formal legal training.

Part One: Government Documents and Digital Projects

Published works of the United States government represent an enormous cross-section of the vast array of responsibilities and interests inherent in the constitutionally- and Congressionally-mandated activities of the three branches of government. Since the beginning of the country's history, the system of creating, disseminating, and storing information produced by the activities of the government has depended on the goodwill of both the government and the public, a goodwill reinforced with a blend of traditional and legislative mandates.

The United States Government Printing Office (GPO) is charged with a three-fold mandate: to provide publishing services to agencies and federal organizations on a cost-recovery basis; to maintain the "perpetual, free and ready public access" of government information, through a partnership with depository libraries; and to distribute copies of government information products to the public on a cost-recovery basis (United States, Gov't Printing Office, *Strategic Vision* 1). The second prong of GPO's mission, to maintain public access for as much government information as is feasible, is embodied by the Federal Depository Library Program (FDLP), created by an act of Congress in 1962. The FDLP has its roots in the depository library system in the United States, which dates back to a Congressional requirement in 1813 that copies of House and Senate documents be distributed to universities, colleges, and historical societies (Drake, *Safety Net* 46). Although Congress passed the resolution in order to ensure that citizens were informed of

the activities of the government, the milieu of the War of 1812 suggests that preservation became an additional motivation. A great deal of the documentation regarding the first few decades of the U.S. government was lost in the 1814 burning of Washington, D.C. by British troops.

Under Title 44 of the U.S. Code and Office of Management and Budget (OMB) Circular A-130, the FDLP now operates with more than 1200 libraries receiving publications from all federal agencies. The cost burden is shared, with the Superintendent of Documents office bearing costs related to distribution, and the participating libraries bearing costs related to acquisitions, cataloging, housing, and collection maintenance (Drake, *Safety Net* 47). The FDLP collects works intended for a wide selection of audiences, including consumers, businesses, educators, lawyers and lawmakers, agriculturalists, medical practitioners, and federal and state agencies. By distributing publications, the government allows the public to examine its workings, its concerns, its findings throughout the research process, and its future directions. The system has never been perfect: certain types of crucial information emanating from the government have long been available only in commercial format, such as court decisions other than those of the Supreme Court (Drake, *Safety Net* 47).

Library professionals at depository libraries also act as advocates for access to non-depository government information materials. Agencies of the federal government began posting material on the open Internet in the early days of the publicly accessible Web. As Internet access became more widespread and Web technologies more robust, the need to preserve born-digital information, and to establish access to legacy documents,

such as the core documents distributed through the FDLP, in a digital format, became more pressing.

That government information is at a crossroads with respect to digital preservation and access has long been understood by both the government documents librarianship community and GPO. By the early twenty-first century, GPO was coming to the realization that all government information would henceforth be either born digital or eventually digitized (United States, Gov't Printing Office, *Strategic Vision 5*). GPO's traditional operational model was developed for a primarily print setting, in which document distribution and cost-recovery models of publication were easily defined and enacted (United States, Gov't Printing Office, *Strategic Vision 1*). Meanwhile, depository libraries were reevaluating their roles as the primary agents for access and preservation, under the assumption that GPO would be taking the leading role in preservation, and access issues would principally be those of attempting to locate items on the free Web (Rossmann 48).

While the most important documents continue to be published and distributed in print format regardless of online availability, GPO now estimates that as many as 95% of documents are currently born digital (United States, Gov't Printing Office, *Recommended Reading 1*). Digital fugitive documents, many of which are published on dot-gov sites, are as difficult to predictably locate as fugitive documents in print, and are virtually untraceable once they have been removed from the agency website (Drake, *Safety Net 47*). Documents and information removed from government web sites can be "the innocuous and trivial as well as the political and controversial" (Jacobs et al. 201). The continuing trend toward born-digital documents has inspired preservation efforts, while

accessibility concerns are driving retrospective digitization and harvesting projects at depository libraries and other institutions throughout the United States.

A U.S. Government Accountability Office (GAO) report, issued in July 2004 at the request of the House and Senate Appropriations Committees, recommended that GPO develop a business plan that shifted its institutional focus from printing to information dissemination, although it is important to note that GAO did not survey depository librarians or the public, and only one panelist was a librarian (Drake, *Transformation* 34). As a result, GPO created a new strategic vision in 2004, in which it developed a model for what would become the Future Digital System (FDSys). The system is intended to catalog, authenticate, store, and distribute all documents within the scope of the FDLP using specific format and metadata standards (United States, Gov't Printing Office, *Strategic Vision* 4). Based on the fundamental Open Archival Information System (OAIS) model, the system as designed was intended to manage the full life cycle of all federal digital information: deposited content, harvested content, and digitized content alike (United States, Gov't Printing Office, *Strategic Vision* 20). This structure is in line with GPO's recognized reluctance to officially deposit any material in a non-tangible format to libraries, often citing authentication concerns (Jacobs et al. 200).

Whether or not this was GPO's original intention, it soon became clear that the digital preservation initiative would require extensive cooperation and input from depository libraries and other institutions in the United States. The first stage of the project, GPO's legacy document digitization initiative, was intended to ensure that GPO would be able to meet its strategic goal of having 70% of the selected materials digitized by the end of 2007 (United States, Gov't Printing Office, Office of Information

Dissemination 4)¹. More recently, however, the 2007 summary report for the digitization demonstration project concluded that the role of GPO in achieving the benchmarks would primarily be as a coordinator and information supplier, with the in-house digitization emphasis remaining on fragile materials, maps, and other materials requiring special handling beyond the capability of most government documents digitization projects. Federal depository libraries, agencies, and private organizations are now encouraged, through the GPO partnership model, to digitize and preserve the legacy collection, as part of a long-term project to create a fully digitized complete collection of federal government publications (2). However, much of the cost burden is still on the libraries, which must process and then maintain these archives (Drake, *Safety Net* 50).

So libraries must take an active and invested role in digital project initiatives in a loose partnership with GPO in order to assist the agency in its long-term mission. Perhaps when FDSys is fully operational, there will be less of a direct need for libraries to maintain these independent archives. However, there is an equally weighty reason for libraries to prepare digital collections of government information, using a model of local storage and upkeep.

¹ Along with the newly developed strategic vision, 2004 saw GPO convening a meeting of experts on digital preservation topics, which it followed with a survey of the depository library community (United States, Gov't Printing Office, *Summary Report* 1). Based on these results, GPO developed digitization specifications and a list of prioritized documents for these projects. According to the final draft of the *Priorities for Digitization of Legacy Collection* from the Office of Information Dissemination, the first four sets of priorities were:

- Preservation-quality back-up files for primary source databases, including the Code of Federal Regulations, the Federal Register, the U.S. Code, the Congressional Record, and other legal resources;
- Other applications on *GPO Access*, including Congressional reports and hearings and the *Budget of the United States*;
- Documents such as the *Census of Population and Housing* and *Social Security Bulletin* that have previously been deemed essential titles but are only available in print format; and
- Rare and endangered documents, based on the recommendations of the American Library Association's Government Documents Roundtable (GODORT) Rare and Endangered Publications Committee.

Throughout the development of FDSys, a major area of concern for some library professionals has been the cost-recovery model for GPO's digital archives. The decline in both the number of print publications created and the demand for acquiring publications in print has severely undermined GPO's main source of revenue. Some of the differential was alleviated by an OMB directive that agencies contracting printing to private printers do so through GPO; and by the correspondingly increased role of GPO employees as account managers for government agencies (Drake, *Transformation* 34). However, GPO continues to operate under a partial cost-recovery model, enabling it to charge fees for value-added products or packaged information.

In a seminal 2005 article titled "Government Information in the Digital Age: The Once and Future Federal Depository Library Program", Jacobs, Jacobs and Yeo argue that "ceding responsibility and control of...information to those who must be held accountable with that information is unwise" (205). The article's FDLP of the future understands that libraries and trusted institutions outside of the government must maintain a high profile role in the preservation of digital government information, and maintains a distributed collection of digital materials to meet the current and future needs of all populations seeking government information (201).

The authors observe that free access and cost recovery must at some level be mutually exclusive, and therefore librarians must be keenly aware that two of GPO's three missions are in conflict with each other. If GPO imposes access restrictions on users located outside of libraries, depository libraries may find themselves severely constrained in what they are able to preserve on their own hard drives and servers. While librarians must operate under the assumption that GPO acts in good faith, technical malfunctions or

agencies with access to the systems could accidentally or deliberately destroy information kept in one place, or in one distributed network². Progress is being made in the development of a GPO sponsored Collection of Last Resort (CLR) (Drake, *Safety Net* 49). A CLR would not, however, be necessarily protected from malicious activity or politically motivated inclusion selection.

In 2005, GPO and Stanford University partnered with a diverse list of FDLP libraries to test the LOCKSS software for the distributed preservation of government e-journals. LOCKSS (Lots of Copies Keep Stuff Safe) is a distributed system of persistent digital content³. Digital objects are stored in “LOCKSS boxes”, which are simply computers maintained in multiple locations that are constantly audited against each other for changes or degradation. Once set up, the open source software requires very little maintenance from the operating institutions. LOCKSS is popular in the library community because it, in the words of the GPO 2007 pilot report, “provides robustness through redundancy” (2).

In the final report, issued in 2007, GPO expressed several concerns with the LOCKSS system, including the difficulty of removing content from the system and GPO’s inability to provide technical support (11). Many other issues were unclear to GPO, including the interest of the depository library community as a whole in participating in distributed preservation programs. GPO concluded that although it had learned lessons from the pilot project, it would continue to focus on developing the centralized preservation and access system originally described in 2004 (14). Free

² The authors also make the excellent point that libraries have a “long-established culture” of valuing the right to privacy for all users, something that could conceivably be questioned with at least some agencies of the federal government (Jacobs et al. 203).

³ More information on the system can be found at <<http://www.lockss.org/lockss/Home>>.

Government Information (FGI)⁴ posted a blog entry shortly after the release of the report in which Daniel Cornwall and Jim A. Jacobs analyze some deficiencies of the report:

The most disappointing thing about the report isn't so much that GPO rejects LOCKSS as a distribution mechanism, but its reasons for doing so... We believe the biggest problems with this report fall into two categories; 1) statements...that appeared to be based on a lack of understanding about how LOCKSS works and 2) negative statements made that have little connection to LOCKSS... [M]ost of the problems that GPO attributes to LOCKSS apply equally to...[FDSys].
(Cornwall)

The potential withdrawal of government documents from publicly accessible forums is not a new problem. Documents that are distributed through the traditional FDLP model are truly deposited, in the sense that they are technically owned by the federal government and loaned for an indefinitely long period to the FDLP system (Rossmann 50). This informs the deselection process for depository collections, in that every item must be kept for at least five years and then offered first to the regional depository library, which has committed to collecting as many items as possible, before it is offered to other depository libraries. GPO also retains the authority to withdraw copies of documents, both for reasons of error and reasons of mistaken release. In 2004, GPO recalled five documents that the Department of Justice had intended for internal use only. The resulting disapproval from the library community, coupled with a FOIA request, led to GPO rescinding the order (Blumenstein & Oder 16). It is not impossible to believe, however, that had the materials been officially withdrawn, more than a few libraries would retain copies made from the original.

⁴ Free Government Information (FGI) is a blog created and maintained by the three authors of "Government Information in the Digital Age", Jim A. Jacobs, James R. Jacobs, and Shinjoung Yeo, along with Daniel Cornwall and James Staub. The content is developed based on the principle that depository librarians need to nurture support from citizens and organizations in order to achieve the goal of fully, freely accessible digital government information. See <<http://freegovinfo.info/about>>.

Based on the recent past and the foreseeable future, libraries will have a critical role in the digital preservation and access of government information. The vision of a centralized, monolithic collection is tempered by a reality with two likely outcomes. Either GPO must depend on libraries for much of the labor and resources, or libraries will be reluctant to leave the responsibility of preserving all government information in the hands of a single federal agency. Consequently, libraries must be prepared to take custody of digital collections, and therefore must be prepared to handle government information works that retain copyright protection.

Part Two: Copyright and Government-Funded Work

Section 105 of Title 17 of the U.S. Code clearly states that works created by U.S. government employees in the course of their prescribed duties are not protected by copyright. The full text of Section 105 is as follows: “Copyright protection under this title is not available for any work of the United States Government, but the United States Government is not precluded from receiving and holding copyrights transferred to it by assignment, bequest, or otherwise.” This exemption from copyright protection is functionally equivalent to the placement of works of the U.S. government into the public domain. Like all works in the public domain, any work of the U.S. government may therefore be reproduced, redistributed, and cited without permission within the United States, as long as the information is not classified as sensitive.

The motivation for this exemption is the admirable conviction that because public money funds all activities of the government, the public should have unrestricted access to the products of its labor.⁵ This public benefit should, and does, outweigh the potential for abuse such as private reproduction and excessive profit from taxpayer-funded works (Simon 432). Another important historical justification for government works to be available without copyright protection is that this naturally increases access to the law of

⁵ Gellman has produced a well-argued description of the dangers of direct political control over government information through copyright. See Gellman 1006-1019. Gellman’s article is a government work and available on the Internet via the persistent URL <<http://handle.dtic.mil/100.2/ADA394923>>, albeit with a confusing cover sheet indicating that the copyright for the work is held by the Syracuse University College of Law and the author, before the (second) government report cover sheet indicates that the work is in the public domain because it was created while the author served as Chief Counsel for a House Subcommittee. I have cited the law journal version, because the pagination makes citation identification easier.

the land (Simon 430). These justifications have also historically been tied with the First Amendment and the backlash against the British monarchy's control of printing presses during the time of the American Revolution (Simon 461).

However, only works for hire, which are prepared during the course of the federal employee's regular duties, are eligible for this exception to copyright protection. Works created using government funding by an entity other than a government employee or officer are not considered works of the U.S. government for copyright purposes, and are instead subject to administrative regulation for the assignment of copyright (Hartnick 5). Because any work created after 1976 that is fixed in a tangible medium of expression is in fact copyrighted, a work created by government funding but not directly by a government employee must have the copyright assigned to the creator or the agency that funded the work. This assignment, and any associated licensing of copyright privileges, is made explicit in the contract or agreement between the government and the entity receiving funding to complete work. The extent to which copyright privileges vest with the creator or with the agency is ultimately a matter of agency discretion: some agencies gain a non-exclusive, royalty-free use for government agencies, while others require the assignment of copyright to the government (Hartnick 7). In this sense, administrative agencies operate as private parties under the bounds of law, a situation unlikely to change unless legislation actively addresses the issue (Hartnick 9).⁶

There are two major types of information products that are produced using federal funding but are potentially eligible for copyright protection. The first is any work that is

⁶ Hartnick makes the interesting observation that judicial direction to regularize practices is unlikely, because the question of copyright is peripheral to the operation of federal agencies, and therefore not covered within their Congressional mandates, and therefore not subject to judicial review (9). On the positive side, Trosow notes that federal courts have upheld agency discretion with respect to putting works in the public domain, so if a change in practice does arise, it will have some precedent in case law (618).

produced by an entity using federal funding obtained in a grant. This includes a great deal of health research, along with research into science, social science, technology, public policy, and so on. The copyright issue is complicated by the fact that these works are created using multiple sources of funding, often including support from a university or foundation as well as National Institutes of Health (NIH), National Science Foundation (NSF) or other sponsoring government entities. Public awareness of the benefits of opening access to research and scholarship is on the rise, however, and the development of open access repositories, particularly if inclusion of federally-funded works is mandated in certain repositories, should serve as a substantial preservation measure to back up the work that libraries, particularly in research universities, are already undertaking to protect their journal subscription investments. Therefore, while works funded by grant remain an area of concern, this discussion will bypass the topic.

The second type of information product is any work that is produced by a contractor on behalf of a federal agency. These works can include reports commissioned on any number of topics, instruction manuals for technological tools developed for government use, and research undertaken specifically for government projects. Many of these works are National Technical Information Service (NTIS) publications, which are not included in the FDLP but represent the output of a significant amount of federally-funded research (Drake, *Safety Net* 50). Information products created by contractors pose a more pronounced problem to libraries interested in government information digital projects, as will be discussed shortly.

Many government contracts are awarded to perform research and development (R&D) activities on behalf of federal agencies. R&D contracts differ from grants in large

part because the object of the research is to meet an expressed need on the part of the agency. Instead of creating a pool of money from which the most interesting or potentially successful avenues of research are given funding, a bid is accepted for the work anticipated to be the most successful in answering the needs of the agency. In other words, these contracts are for performing work that, under other circumstances, the agency in question might staff and equip itself to perform.

Contracts save the government money because the development of necessary expertise and equipment is left to the private sector, which is forced by market pressures to work as efficiently as possible. The cartoonish image of the federal government as a bloated, unwieldy bureaucracy would be that much worse if the government directly engaged in its own R&D. While an additional bureaucratic system is necessary to manage the bidding and awards process, and while the potential for corruption or favoring particular businesses is still present, it is difficult to argue that the federal government would be more efficient without contracting.

The shift to allowing contractors to retain certain intellectual property rights picked up momentum in the 1980s (Brock 5).⁷ The motivation for permitting contractors to retain the rights to their work is based on the same motivation for the recognition of intellectual property: that the contractors would be unwilling to create the work without the added motivation of being able to economically benefit from their work outside of the contractual reimbursement (Simon 425). Additionally, by retaining exclusive rights to

⁷ The Bayh-Dole Act of 1980 addressed these concerns specifically for patents, which offer a vastly greater potential source of revenue for the types of companies the government wishes to attract for research and development. A 1983 Executive Order (E.O. 12591) reaffirmed the government's interest in promoting commercial activity with inventions resulting from federally-funded research (Brock 6).

intellectual property, the contractor has more incentive to publicize research and continue to develop lines of future research (Brock 5).

However, the social cost of copyrighting this information could in fact be high enough to justify federal agencies spending more on the initial contract in order to request the transfer of the work's copyright to the government upon completion (Simon 440). This is especially true since inexpensive distribution of information is no longer a serious problem. It is important to note here that this change would only be meaningful in the context of the right to freely redistribute government works if the government then placed the work in the public domain. Agencies of the U.S. government can (and do) directly hold the rights to some intellectual property, just as any individual or corporate entity within may hold property rights, and are permitted to prosecute unauthorized use.

Contracts for federal agencies are administered with a great deal of agency latitude. However, there is a core of acquisitions regulations to which most federal agencies are subject, and any government expenditure for a contractual activity is regarded as an acquisition.⁸ The Federal Acquisition Regulations (FAR), codified in Title 48 of the Code of Federal Regulations (CFR), guides most non-military agencies, including NASA.⁹ Agencies may have their own supplements, but the regulations generally permit exceptions based on the specific situation, needs of the agency, and anticipated needs of the users of the information.

Unless provided otherwise by an Agency FAR Supplement...[t]he express written permission of the Contracting Officer is required before the contractor may assert or enforce the copyright in all...works first produced in the performance of a

⁸ The following discussion of FAR as it relates to copyright is based on the "Frequently Asked Questions About Copyright" developed and maintained by CENDI, the cooperative group for managers of scientific and technical information throughout the federal government. See <<http://www.cendi.gov/publications/04-8copyright.html>>, particularly Section 4.

⁹ FAR may be browsed online at <<http://www.arnet.gov/far/>>.

contract. However, if a contract includes Alternate IV of the clause, the Contracting Officer's approval is not required to assert claim to copyright. *Whenever the contractor asserts claim to copyright in works other than computer software, the Government, and others acting on its behalf, are granted a license to reproduce, prepare derivative works, distribute, perform and display the copyrighted work.* (CENDI 22, emphasis added)

Similarly, Defense Federal Acquisition Regulation Supplement (DFARS) guides Department of Defense acquisitions. DFARS recognizes the contractor's copyright unless a clause is inserted in the contract to assign the copyright to the U.S. government. While it is interesting and useful to understand the variety of possible contracts, the most important point for those interested in using the works is that the license that the government retains is for unlimited use within the government and for authorized governmental purposes.¹⁰ Unlike other works of the federal government, which may be used without requesting permission from the issuing body, works for which a copyright claim exists must be cleared for use by either the copyright holder or the issuing government agency. It is important to note is that while the government may permit others to act on its behalf, there is no implied assumption that any given non-governmental entity has permission from either the government or the copyright holder to reproduce or redistribute the work, absent an explicit arrangement. Therefore, the responsibility appears to rest on non-governmental entities to discover that the work is protected and apply for permission from the governmental agency for a use on the government's behalf, or from the copyright holder for any other use not explicitly permitted by copyright law.

¹⁰ This complicating factor of determining the copyright status of a work produced by government funding is relevant to publishers, who often request reassignment of copyright from the author to the publisher as part of the conditions of publication, and who cannot have the rights so assigned if they do not exist: that is to say, because works created by government employees are not subject to copyright, there is no copyright protection to be transferred (Tresansky 606).

In the scenario in which a depository library is concerned with the digital preservation of a copyright-protected work created using federal funding, the obvious solution to the problem is to rely on GPO, which would implicitly have permission to use the work, under the prevalent contract regulations. However, as discussed above, libraries may be unwilling to fully rely on GPO to provide perpetual preservation and access. To Hartnick's ideal administrator, one who "would accommodate the perceived needs for his or her agency, the necessity for dissemination of the information to the public, and the appropriate incentives to authors..." (8), the preservation community would likely wish to add the requirement that the administrator consider the possibility that the work will be digitally preserved by a non-governmental entity. Unfortunately, this is not yet standard practice.

Indeed, an opposing trend is to afford more intellectual property rights to contractors, in part to increase the leverage agencies may have in obtaining the contract on otherwise favorable terms. Speaking of intellectual property in general, Jack L. Brock, Jr., then the Managing Director of Acquisitions and Sourcing Management, a GAO research unit, remarked in his 2002 Congressional testimony that:

[c]ontracting for intellectual property rights is difficult. The stakes are high, and negotiating positions are frequently ill-defined. Moreover, the concerns raised by both parties must be tempered with the understanding that government contracting...can be challenging even without the additional complexities associated with intellectual property. Further, commercial contractors often have a variety of reasons for not wanting to contract with the government, including concerns over profitability, capacity, accounting and administrative requirements, and opportunity costs. (2)

Given these factors, it is unsurprising that the needs of the preservation community would be heavily deprioritized, or go entirely unrecognized.

To demonstrate the potential relevance of these materials, consider the following example. *Advanced Wind Technology: New Challenges for a New Century*, by R. Thresher and A. Laxson, is included in the GPO online catalog, and has a persistent URL (PURL) under GPO auspices, a Superintendent of Documents (SuDoc) classification number, and an item number. The PURL resolves to the PDF version of the document on the National Renewable Energy Laboratory (NREL) website. However, the notice on the second page of the document indicates that it is a manuscript created by an employee of the Midwest Research Institute, citing a contract number. The notice indicates that both the U.S. government and the Midwest Research Institute “retain a nonexclusive royalty-free license to publish or reproduce the published form of this contribution, or allow others to do so, for US Government purposes.” The notice also indicates that the document is available electronically from the Office of Scientific and Technical Information (OSTI), available in print from OSTI for a processing fee to the Department of Energy and its contractors, and on sale to the public in paper from the National Technical Information Service (NTIS).

This is a work that may be of interest to both current and future researchers. The body of the work is a summary of the evolution of commercial U.S. wind technology, and factors that will influence future changes and developments in the field. Researchers and students who are interested in the future of power from wind technology will certainly be able to access this article over the next few years for no charge from the NREL website. However, a researcher studying the development of wind technology in several decades will only have access to this document if GPO places a copy of the document on its servers and makes it available, unless the digital object is included in a preservation

program by a non-governmental entity, or printed and retained by a predecessor in the field. While GPO may follow its commitment to preserve this specific work, reasons to remain concerned about a monolithic government information repository remain valid in principle.

Earlier NREL documents were deposited as part of the FDL P, and because the library has permission to retain these physical copies, their future accessibility is not in question. However, should a library determine that it wishes to retain and make publicly available copies of these digitally-distributed products for preservation purposes, it now faces the same dilemma that all digital projects face: how to address the copyright protection.

Part Three: Copyright and Digital Projects

Copyright law, as enacted in Title 17 of the U.S. Code, and as elaborated in case law, dictates some clear boundaries with respect to what cannot be done with a work protected by copyright. For example, it is against the law to reproduce a work for profit without the express permission of the copyright holder. However, it is permissible to resell a work protected by copyright, and to make a back-up of a legally purchased computer program for personal archival purposes. On the other hand, the reproduction of a short poem in its entirety within a critical article falls into the legal gray area of fair use: the reproduction of segments of works for the purpose of criticism is a recognized exception, but the reproduction of works in their entirety is generally not. These exceptions to copyright protection are codified in a sufficiently vague way as to raise an array of unanswered questions and leave room for interpretation in case law. Particularly for libraries and archives in digital settings, there are major gaps in guidance for what is legally permissible and what may be subject to prosecution by the intellectual property owners.

Absent developments in case law or changes in legislation, these institutions must rely on the interpretations of their in-house legal counsel, which will attempt to balance the legally defensible needs of the institution against the rights of the intellectual property holder, sometimes on a case-by-case basis. In any case, the institution must accept the risk that counsel will make an incorrect interpretation, or will make a determination that

an activity is not covered by fair use, out of fear or risk aversion.¹¹ A successful lawsuit can obtain damages at a minimum of \$750 per infringed work, as per Section 504 of Title 17, in lieu of demanding profits resulting from the infringement.

In the United States, there are no restrictions upon copying and redistributing information objects that are not protected by copyright, absent trademark or patent protection. These include works created prior to 1923; works of the U.S. Government (with some exceptions, as discussed above); works whose intellectual property owners have explicitly placed them in the public domain; and other works for which the copyright protection has expired (CENDI 11). Additionally, the first sale doctrine prevents the copyright holder from controlling individual copies of a work once they have been purchased, making library lending and used book sales possible.

In her 2003 work on copyright and digital libraries, “America’s Cultural Record: A Thing of the Past?”, Laura N. Gasaway observes that “preservation” generally refers to two different processes: preservation of artifact, more properly called conservation, and preservation of content (645). Conserving an analog, or print, object does not interfere with the copyright holder’s rights. However, preserving the content of an analog object in microform or digital format involves reproduction and, in the case of digital formats, the possibility of inadvertent or deliberate distribution. The preservation of a digital object is similarly problematic from a copyright perspective, but so is conservation because license agreements may prevent particular modes of access, such as copying the object onto a library-owned server, and certain technological protections may interfere with future access to the digital object (646).

¹¹ I am indebted to David W. Price for making this observation.

Gasaway also observes that some of the potential copyright issues with digital reproduction have already been faced with microfilm preservation: specifically, that the act of creating the copy for preservation requires making more than one copy (646). However, this problem as it exists for digital objects is magnified because of the ease in copying and redistributing illicit digital copies that does not generally apply to copies in microforms. Ayer and Muir identify additional rights issues with activities necessary for digital preservation. For instance, migrating from one digital medium to another may change the content, recreating a digital object as a new version is similar to republishing, and copy protections may have to be circumvented in the process of any of these activities. Finally, it is difficult to demonstrate the difference between a copy and a new version in digital formats (Table 2).

Title 17 includes three general exceptions to copyright protection, which extend the right to create reproductions given certain circumstances.¹² Section 107 provides for copying and redistribution that meets specific qualifications for what is broadly known as “fair use.” Section 108 is the preservation section that allows non-profit institutions like libraries and archives to create a specific number of copies for the purpose of preservation. Section 108 has been modified most recently by the Copyright Term Extension Act (CTEA) and the Digital Millennium Copyright Act (DMCA), the latter of which will be discussed at length.¹³ Section 117 of Title 17, the third exception to

¹² Much of the following discussion on fair use is based on June Besek’s 2003 work, *Copyright Issues Relevant to the Creation of a Digital Archive: A Preliminary Assessment*. Interestingly, Besek’s work is protected by copyright even though it was simultaneously published by the Library of Congress and has been freely distributed online. See <<http://www.clir.org/pubs/reports/pub112/contents.html>>. The print version was used in the preparation of this work, because of the relative simplicity of citing a page instead of a section.

¹³ The Copyright Term Extension Act, in addition to increasing the term of copyright and therefore increasing the amount of time before many works would enter the public domain, made provisions for the preservation of orphaned works within Section 108 (Gasaway 657). The orphaned works provision is

copyright limitations, permits the owner of a computer program to make an archival copy. Because this applies only to programs and not digital objects, this exception is not directly relevant to digital libraries (Besek 6). However, the two other exceptions are integral to the legal leeway that may permit libraries to create digital copies of copyright-protected works for the purposes of preservation, scholarship, and research.

Fair use is the exception in copyright law that allows particular types of reproduction and redistribution. Section 107 of Title 17 describes the four factors that are balanced to determine whether a specific use of a copyrighted work is fair and therefore permissible: the purpose and character of the use; the nature of the work in question; the amount of the work used; and the effect on the potential market.

The nature of the work is a factor considered in fair use. A fact-based work is more open to fair use than a fictional work (Besek 5). This could be in part due to a latent interest in maintaining the moral rights of the creator of a fictional work with respect to the expression of the vision and context of the original work, although this is not made explicit in U.S. law (Kwall 355).¹⁴ Unauthorized copies of unpublished works are less likely to receive protection as fair use, because distributing copies of an unpublished

intended to permit the reproduction of works that no longer have a publisher or other legally-entitled parties interested in commercial exploitation, although Gasaway observes that these works are quite unlikely to be of interest to those engaged in preservation for scholarship and research. For digital projects involving federally-funded works, the orphaned works provision is effectively a moot point, because even if the copyright holder is no longer interested in commercial exploitation, the federal government continues to be a party to the copyright protection. The increase to copyright terms, however, is relevant to every party with an interest in copyright-protected works.

¹⁴ Moral right, or the right to have works correctly attributed and accurately represented, is not enforced by U.S. law, although it is part of the copyright landscape in a number of other countries. Instead, owners of intellectual property in the U.S. must have legal standing in order to prosecute unauthorized uses of their work, or must have a recognizable complaint under libel and defamation law. This is unlikely to be problematic for a digital project administered by a library, although one could imagine a scenario in which a digital display of works (for which permission for a public display had been obtained) did not match the wishes of the copyright holder with respect to the representation of the material.

work dilutes the economic value of the work to a greater extent than for a published work (Kwall 347).

While fair use is generally considered to only allow the reproduction of a portion of the work and not the entirety of the content, June Besek indicates that there are situations in which complete copies are fair use under the prevailing law (5). The example she gives in a footnote is *Sony Corp. v. Universal City Studios, Inc.* (1984), the “Betamax” case where it was decided that using a video recorder to capture free television programs for personal later viewing is fair use (ftnt. 43). The closest parallel to a library setting may be a non-profit entity creating digital copies of copyrighted works and storing them on password-protected servers. Whether this application of fair use could extend to this or a similar library situation has not been determined in court.

Another factor used to determine fair use, the effect on the potential market, is often favorable to libraries and archives because their concern is most often with preserving objects that are not readily available on the market. If the library or archive is operated on a not-for-profit basis and is not redistributing the work, this fact will weigh heavily in the determination of fair use (5). It is important to note, however, that placing a digital object on the free Web could potentially be considered redistribution, which could remove publicly accessible digital archives from this exception.

The purpose of the reproduction component of fair use is also favorable, in Besek’s view, for digital preservation projects because the reproduction is presumably being made for the purposes of future scholarship and education. While transforming the work is more established as a potentially fair use, there are circumstances in which full reproduction is considered fair use, such as multiple copies for classroom use. Of all of

the facets of fair use, the market value may hold the most persuasive weight for the digital reproduction of federally-funded works, because in most cases the contracting agency already has a license to reproduce and redistribute the work for governmental purposes, leaving less market value available to the copyright holder.

In summary, Besek indicates that the law tilts in favor of finding for fair use when the reproduction is for scholarship, research, and teaching, as well as criticism and news reporting (5). She indicates that the lack of clarification in the law means that the law is open to development and change through case law, making it more favorable in the long run to institutions of research and scholarship, since the preservation of documents is invariably in the public interest. On the other hand, Lopatin cautions that the field is still divided on this point, as the cost of potential liability for infringement may outweigh the possibility that such use may not be deemed fair (278). Covey notes that the legal counsel for the university hosting the project may determine that the library cannot assume the risk that preservation is permitted by fair use (26). Case law and future legislation may be required for digital projects incorporating copyrighted work to be truly legitimized under fair use, if the copying is of a nature not expressly permitted elsewhere in Title 17.

Section 108 of Title 17 is the exception which permits a library or archive to create copies of copyright-protected works for the purposes of preservation and research use. More specifically, libraries are now permitted to make up to three copies of unpublished works protected by copyright in their collection for preservation purposes, as long as the copies are not made available off the premises. The same is true for published works, if the library determines that a replacement cannot be obtained at a fair price. In

either case, this reproduction may be limited by the license under which the library accesses the work (Besek 4).

Despite this explicit permission for libraries to make up to three copies for the purposes of preserving a work, libraries may not redistribute copies as part of the preservation process, and they may not preserve an item unless they own a tangible copy. This does not provide clear guidance for digital repositories, which can contain objects that were never available in print. Because of the way computers store and retrieve information, copies necessarily exist in both the local or remote hard drive or disc and the RAM of the computer workstation, and copies for use may be saved in different formats from copies for preservation. The process of making a digital copy of a web page can involve up to twenty copies of the content (Kwall 352). Additionally, a copy stored on a server may be accessed by any computer with the appropriate permissions, creating more potentially illicit copies.

The Digital Millennium Copyright Act amended Title 17, Section 108, of the U.S. Code as part of its overall project to create and describe copyright protections for objects in digital formats. The primary issue for digital projects addressed by the DMCA is the prohibition against circumventing digital rights management (DRM) in order to access content. While there is no archival or fair use exception, the law provides for an administrative review process every three years, at which time the Librarian of Congress can use a rule-making process in order to determine whether the DRM protections may be circumvented for particular types of works (Besek 12). This could potentially pose a problem for libraries engaged in capturing any type of government work that was produced under DRM protection.

The DMCA did settle a legal gray area within digital preservation by expressly permitting three copies of copyright-protected works as recognized by microforms preservation standards: the primary copy, the master copy, and the use copy (Gasaway 653). As discussed above, more than three copies are actually created during the process of creating and displaying digital files, but the language recognizes that the copies may be made in a variety of formats, including digital. The copies, however, may not be made available outside the library's premises if they are in a digital format. This does not prevent a library from making one its preservation copies a print copy and lending it outside of the library (653).¹⁵

Systematic copying of copyright-protected works is now expressly prohibited, meaning that digitally preserving all materials under copyright regardless of their condition is not permissible. Gasaway suggests that the resolution is to use the extent to which fair use permits copying, given that the copying is for the purposes of preservation (653). As discussed above, the strength of fair use for preservation is as yet untested. However, for the federally-funded works that are of interest to this discussion, it seems that an attempt to digitize *en masse* would be fairly unlikely, and the systematic copying of most government publications is not problematic because of their lack of copyright protection. The more pressing issue is whether these exceptions in Title 17 will in fact

¹⁵ The DMCA copyright exception for making a copy in order to replace a published work depends, first, upon the library originally owning a copy of the work in question: unlikely, in the case of some hard-to-find government documents. The library must then determine that a replacement copy cannot be obtained at a fair market price, defined as either the latest retail price if the work is in print, or the cost of printing materials plus royalty payments (Gasaway 656). The law does not indicate whether libraries must search for a used copy, the purchase of which would not provide a royalty payment to the copyright holder (660). The library may then make three copies, whether digital or analog, as long as the copies are not made available to the public outside of the library if they are digital (655). What remains unresolved is that if the work was distributed in digital format, and originally made available with the appropriate licenses on the library intranet or other local area network, it seems that the same permissions ought to apply to the replacement copy, but this is not made explicit (656).

extend to federally-funded works made available in digital formats for the primary purpose of increasing public access.

According to Gasaway, prior to 1976, there were few problems preserving works using microfilm or other microforms because the shorter copyright period ensured that most of the works preserved in that manner were already in the public domain (648). With the term extensions for intellectual property rights granted by the Copyright Act of 1976, and again by the CTEA, works that had previously been in the public domain were no longer necessarily in the public domain. Currently, any work created between 1923 and 1964 may be under copyright protection, making the digital preservation of works of the twentieth century a much more uncertain prospect (649).

Many works published in the United States contain a notice of copyright that includes the date, the holder of the copyright at the time of publication, and information about the publisher, which can be used to contact the copyright owner. For older works, works published outside of the mainstream publishing industry, unpublished works, digital objects that do not include a statement of copyright, and items that otherwise fall through the cracks, the responsibility of determining whether a work is subject to copyright protection falls on the institution that wishes to make a copy.¹⁶

Copyright can be transferred, as can most types of intellectual property. Limited rights, such as reproduction or derivative works, can be transferred verbally, but an

¹⁶ The lack of a notice does not determine the copyright status of a work. While copyright owners must register with the Copyright Office in order to file a suit for copyright infringement, there is no need to register in order to gain protection (Besek 6). Additionally, the legal requirement to deposit two copies of the work with the Library of Congress via the Copyright Offices does not constitute registration with the Copyright Office (7). Therefore, simply contacting the Copyright Office is insufficient to determine whether a work is covered and/or who the current holder of copyright is. Older works are more likely to be registered because registration used to be mandatory (10). In the case of federally-funded works, the contracts are public information, and will indicate with whom the copyright resides, if the government is unable to directly provide permission for use.

exclusive license or ownership transfer must be made in writing (Besek 10). Although it is not required, the new copyright owner has a vested interest in recording the transfer with the Copyright Office in order to establish the claim of ownership, particularly when the work is currently commercially exploited (Besek 10). Works with multiple copyright holders can be particularly problematic (Ayer & Muir, Table 2). The specific terms of the contract governing the creation of federally-funded works may ameliorate issues related to ownership, but the requirement for research on the part of the institution conducting a relevant digital project is unchanged.

Seeking permission to include a copyrighted work in a digital project is the sole clear pathway to removing legal uncertainty, and is required to make a claim of due diligence in case of a lawsuit, but the process of locating the intellectual property owners for older works which may be deteriorating, or for digital or print works without clear author attribution, can be daunting. One of the projects described in Denise Troll Covey's work on permission-seeking projects, the Posner Memorial Collection of fine and rare books, calculated a minimum cost of \$78 per work when the publisher could be found and permission was granted (34). The project succeeded in obtaining permission for 71% of the titles considered (27).

For works for which the copyright owner cannot be located, the library or archive must choose whether to proceed with the copying. Besek indicates that if the work is considered for inclusion in a database where it can easily be removed, the decision to include it is less risky than if the work is to be used as the basis for a project. However, removing it upon complaint does not relieve the liability of the institution in an infringement lawsuit (10). The Posner project included a three-strike rule, whereby a

publisher failing to respond to the initial letter and two follow-up attempts was considered to have denied permission (Covey 26). Gasaway indicates that the American Memory Project, the major national digital preservation initiative, is hampered because the Library of Congress will not store digitized works unless it can obtain permission from the copyright holder (650).

Articles on topics related to libraries and copyright tend to advocate a reading of the current law that is favorable to preservation for non-profit purposes, particularly given the institutions' role in preserving the many elements of the public and private record that help to create the historical record. Many are wary, however, of the risk assumed by the library when the permission to create a copy is not explicitly clear. Several have suggestions for revisions of the law that would allow for more clarity than will trickle in through the future development of case law. While this issue is far from the agenda of the U.S. Congress at this time, these pictures are instructive in that they show the extent to which the law may be unfavorable, or at least in question, with respect to the activities of digital repositories. These questions are ones to which libraries must devote some thought when engaging in projects where permission to copy is in question.

Kwall argues that it would be possible for Congress to restructure Section 108 in a way to favor digital copying for preservation purposes without significantly diluting the other rights available to the copyright holder. These revisions, which would rely on the changing interpretation of fair use, would emphasize the extent to which digital preservation does not affect the market for a particular work (355).

There is considerable support for licensing solutions that would benefit both publishers and libraries or archives (Ayer & Muir, 4.3. para. 2). Already, there are some

information providers that will either allow libraries to retain control of content after the term of license ends, or who have made guarantees that, should their operation become defunct, the holdings would be made accessible to the general public, potentially allowing for preservation measures on the part of individual institutions. Still, the apathy copyright holders often demonstrate with respect to their property may prevent this model from becoming sufficiently robust. This apathy could be translated, in the case of GPO, to an overwhelming situation in which some of the works to which GPO would theoretically provide digital access instead slip through the cracks. Some material may be lost before it is ever made openly accessible.

Ryan argues that Congress should specifically delineate legal rights for non-profit digital archives as part of a national strategy for digital preservation (176). Extending to non-profit libraries and archives the right to copy the World Wide Web for preservation purposes, the right to preserve endangered works by copying, and the right to lend works that have been commercially unavailable for five years would greatly ease the legal burden on libraries and ensure that critical parts of the cultural record are preserved (175). Already it is true that many institutions, most famously the Internet Archive, are preserving the World Wide Web through a copying and redistribution model, under the assumption that it is permissible to do so as long as copyright holders are given a method for opting out (Hirtle). The Internet Archive, however, does not have special legal protection entitling it to copy websites for preservation purposes. Gasaway takes the idea a step forward and argues that a national digital library should be created, perhaps under the auspices of the Library of Congress, to coordinate and store long-term digital preservation projects on a massive scale (655).

The open access movement has demonstrated in recent years that alternative methods of scholarly discussion and activity can co-exist with traditional models such as scholarly journals. Providing materials in an open access system with the permission of the copyright holder is still distinguishable from the unauthorized reproduction of materials for profit. While the abolition of intellectual property would be both undesirable and unconstitutional, relaxing copyright controls for digital preservation activities, particularly for non-profit entities, particularly for older materials, and particularly for matters of widespread public interest, will unquestionably enhance the ability of these institutions to ensure that digital ephemera will be collected, organized, described, and made available for the foreseeable future.

Conclusions

This work presents the consequences of modern policies for an imagined future in which depository libraries have moved beyond staying afloat in the digital world to become widely recognized leaders in the authentication, accessibility, and preservation of digital government information. While libraries have an undeniable responsibility to respect intellectual property rights, the need to maintain access to contemporary and historical works emanating from the activities of the federal government will not diminish.

Future research on this topic could include a survey to determine the classes of government information, both print and digital, that are most at risk for loss without proactive involvement from the depository library community, or are particularly sensitive and therefore in need of non-governmental custodianship for guaranteed public access. Another investigative topic could be the development of a survey of contracts for government information products of interest, in order to determine the level of availability for those works of most interest to government preservation activities.

Libraries and archives interested in digitizing works or preserving born-digital objects must carefully examine every element of their project, including the condition of the works and the copyright status of the works. While copyright law does protect libraries in specific circumstances, digital projects can be extremely costly if copyright permission must be secured, and the risk assumed must be understood when permission

cannot be secured. If the government cannot grant blanket usage permission on behalf of the copyright holders, digital projects including federally-funded works could face significant barriers. On the other hand, if a clear understanding can be reached with the U.S. government that these preservation activities fall within the spirit of copyright law, or if a clear understanding can be reached that any institution working in good faith to preserve federally-funded works is acting on behalf of the U.S. government, then these items could simply merge in with the workflow of government information digital projects. Perhaps such an understanding could come through GPO, or through Congressional or Presidential action.

For the most part, libraries at colleges and universities will need to work with their legal counsel to determine the extent to which the library may interpret the fair use doctrine and the library preservation section of Title 17. For institutions willing to undertake such a project, every possible measure should be explored for minimizing the legal risk. Balancing the library's role of protecting digital information sources and promoting them for scholarship purposes, with the role of respecting intellectual property owners' rights and behaving responsibly with respect to the legal status of the institution may be impossible, but it is necessary to try. Eventually, the law should catch up with technology and the needs of researchers, and the responsibility of the institutions of preservation in the United States may in fact be to ensure that as much of the record of government activity as possible is still available for that day.

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