

Software Copyright Impact Survey

Introduction

NIST's *Return on Investment (ROI) Initiative* supports the President's Management Agenda goal of modernizing federal government practices to further fuel the nation's engines of innovation by maximizing the transfer of Federal investments in science and technology to the private sector.

The ROI Initiative is the culmination of a broad-ranging and inclusive review of policies and practices that constrain technology commercialization. One of these constraints is the regulatory prohibition of copyright protection on software developed by federal agency employees (Title 17, Section 105, of the United States Code).

This survey is part of a NIST-sponsored study to assess the future economic benefits of eliminating the prohibition of copyright protection for software developed in government-operated federal laboratories. Contractor-operator federal laboratories are included because of their extensive experience with copyrighted software.

The survey covers two time periods, 2015-2019 and 2020-2024. Based on your informed judgement, we want to obtain, for the laboratory or facility (or laboratories or facilities) that you are responding for, estimates of the approximate number of software products (and associated revenue) that *have been* subject to copyright protection in federal laboratories (either because the lab is contractor-operated or because of exceptions that apply to government-operated labs), and the number of software products without copyright protection that *could be* available for copyright protection *if* the prohibition was eliminated. We will use the information you provide to estimate the net economic benefits of such a policy action. *Please answer all questions to the best of your ability. The information provided will be used to estimate costs and revenues as functions of numbers and types of software products. Individual responses will not be attributed to you, the survey respondent, or the specific laboratory or facility with which you are associated. Issues concerning specific survey questions should be directed to David Leech <david.leech@starpower.net>.*

Disclaimer: By design, the data entry fields in this survey form are not intended for the insertion of sensitive personally identifiable information (SPII)—nor are they intended for any proprietary business identifiable information (BII). Please take Federal best practice precautions in not inserting any data that is not explicitly requested.

Note: This collection of information contains Paperwork Reduction Act (PRA) requirements approved by the Office of Management and Budget (OMB). Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number. Public

reporting burden for this collection is estimated to be thirty (30) minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the National Institute of Standards and Technology, Attn: Nicole Gingrich <nicole.gingrich@nist.gov>; Phone: 301-975-8034.

Standards and Technology U.S. Department of Commerce

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Section 1

Laboratory Identification, Agency Affiliation, and Operator Type

1. Identify the laboratory/laboratories (or laboratory facility/facilities) for which you are responding.

2. <u>Name the parent federal agency</u> of which your laboratory/laboratories (or laboratory facility/facilities) is/are a part.

3. Is/Are the laboratory/laboratories (or laboratory facility/facilities) you are responding for considered government-operated or contractor-operated? (Choose one, or if you are responding for multiple laboratories or facilities and they are not all considered to be in the same operation category, please list each in the "other" box and identify each as GOGO or GOCO.)

Government Owned Government Operated (GOGO)

Government Owned Contractor Operated (GOCO)

Other (please specify) and identify as either GOGO or GOCO.

If answering for multiple labs or facilities, from this point on just respond to each question for the collection of those labs or facilities.



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Section 2

Software Licensing & Public Domain Software Release Activity 2015-2019 (in the laboratory/laboratories or laboratory facility/facilities for which you are responding)

For fiscal years, FY15-FY19:

4. For the FY15-FY19 period as a whole, approximate the percentage of the two custom-developed software* product categories that your laboratory/laboratories (or laboratory facility/facilities) contributed to your parent Federal agency's ({{ Q2 }}) total output in those categories:

*Custom-developed computer software refers to software developed by agency employees as part of their official duties and software written as part of a federal contract or otherwise fully funded by the federal government. It includes computer software projects, modules, plugins, scripts, middleware, and application programing interfaces (APIs).

Percent of parent federal agency

Software exclusive of open source	‡
Open source software	‡

5. How many custom-developed software products made by your laboratory/laboratories or facility/facilities were made available for licensing? (For GOGO labs it is understood that copyrighted software products transferred to federal agencies or protected outside the U.S. are available to be licensed.)

Number available for licensing (numerical only please):

FY15	
FY16	
FY17	
FY18	
FY19	

6. Estimate the approximate percentage distribution of the kinds of intellectual property protection applied to software products available for licensing:

	Percent
Copyright only	I
Copyleft only	¥
Patented only	
Copyrighted and patented	+

7. Estimate how many custom-developed computer software products were licensed and the average number of times each product was licensed in each fiscal year:

	Number of products licensed	Number of times (on average for those products) each product was licensed	Number of "seats per license" (on average for those licenses, if this metric applies)
FY15	+		+
FY16	\$		\$
FY17	\$	\$	\$
FY18	\$	\$	\$
FY19	\$	\$	

8. Estimate the annual total dollar amount of revenues generated by software licenses:*

* Total revenues should include at least license issue royalties, minimum annual royalties, earned royalties, sub-licensing royalties, and benchmark royalties but not unreimbursed expense royalties. The latter will be included as part of licensing costs.

Annual revenue (nominal dollars):

FY15 (\$)	
FY16 (\$)	
FY17 (\$)	
FY18 (\$)	
FY19 (\$)	

9. How many custom-developed computer software products were available for download to the public without a license*?

*Such public release software includes software released to the general public or other federal agencies without copyright or copyleft restrictions, and software

released to the general public or other federal agencies for non-commercial use (exclusive of open source).

FY15	
FY16	
FY17	
FY18	
FY19	

10. To the best of your knowledge, for FY15-FY19 as a whole, estimate the percentage distribution of the software products available from your laboratory/laboratories (or laboratory facility/facilities) across the following categories:

	Percent
Percent released as open source	+
Percent released to the general public or other agencies for non- commercial use (exclusive of open source)	\$
Percent released to general public without copyright or copyleft restrictions	↓
Percent released under other conditions	\$



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Section 3

Software Development and Management Costs, 2015-2019 (in the laboratory/laboratories or laboratory facility/facilities for which you are responding)

Costs over the entire period, 2015-2019:

Software Development Costs

11. Estimate the average, maximum, and minimum number of lines of source code for the typical individual custom-developed software product developed by your laboratory/laboratories (or laboratory facility/facilities):

Average	
Maximum	
Minimum	

12. For the average size software product (in terms of lines of source code), estimate the average number of full-time equivalent (FTE) person-years required for its development (and a representative GS-rating):

Average number of FTE person-years	
Representative General	
Schedule (GS)-rating	

Software Management Costs

For software made available for download to the public with or without a license:

13. Over and above the cost of developing software that is released to the general public with or without a license, is there a significant annual cost to maintaining this software in terms of writing additional software or managing and administering the inventory once released? If so, please provide estimates of the average annual number of full-time equivalent (FTE) person-years required and a representative GS-rating:

Average annual	
FTE person-years writing \Box	
supporting software	
Representative General $_{\!$	
Schedule (GS)-rating	
Average annual	
FTE person-years	
administering software \Box	
inventory	
Representative General	
Schedule (GS)-rating	

With reference to licensed software

14. Internal to the laboratory/laboratories or facility/facilities for which you are responding, what is the average annual number of full-time equivalent (FTE) person-years (and representative GS-rating) dedicated to obtaining and maintaining intellectual property protection, and managing the licensing transactions for your software portfolio?

Average annual number	
of FTE person-years	
Representative General,	
Schedule (GS)-rating	

15. For the laboratory/laboratories or facility/facilities for which you are responding, estimate the average annual annuity fees (paid to maintain all issued patents) required to maintain your software portfolio:

Average annual cost of	
annuity fees (\$)	

16. External to the laboratory/laboratories or facility/facilities for which you are responding, what is the average annual cost of the legal support required for obtaining and maintaining intellectual property protection, and managing the licensing transactions, for your laboratory's software portfolio (including, if known, unreimbursed expense royalties)?*

* External legal costs include all annual expenses paid to private sector law firms in support of the agency's portfolio of software patents and copyrights.

Average annual cost of	
external legal support (\$)	



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Section 4

Counterfactual Software Copyright License & Public Release Activity 2020-2024 (in the laboratory/laboratories or laboratory facility/facilities for which you are responding)

Assuming Elimination of the Copyright Prohibition for Government Works

We would be grateful for your experience-based forecast of the 2020-2024 period assuming the copyright prohibition for government-produced software is eliminated.

17. Assuming the elimination of the copyright prohibition for government works, estimate the average annual number of custom-developed software products that will be available for licensing:

5-year annual average for number of products available for licensing

18. Assuming the elimination of the copyright prohibition for government works, estimate the average annual number (and frequency) of custom-developed software products that will be licensed:

5-year annual average for the number of software products	
5-year annual average for number of times each product is expected to be licensed	
5-year annual average of the number of "seats per license" (if this metric applies)	

19. If the copyright prohibition for government works was eliminated, estimate the distribution of custom-developed software products across the following software release categories: (Note that with the prohibition eliminated, software inventions could be covered by both copyrights and patents.)

	Percent
Percent patented but not copyrighted	+
Percent copyrighted but not patented	+
Percent patented & copyrighted	+
Percent copyrighted as open source	+
Percent released to the general public or other agencies for non- commercial use (exclusive of open source)	*
Percent released to general public without copyright or copyleft restrictions	\$
Percent classified or export controlled	+

Compared to the 2015-2019 period:

20. Do you anticipate the average number of source lines of code for individual custom-developed software products available for licensing will grow, decline, or stay roughly the same? (Please choose one response and enter the %.)

Average annual growth (%)	
Average annual decline (%)	
Remain the same (enter the number 0)	

21. Do you expect the average annual dollar amount of revenues generated per licensed software product (i.e., after removing the effects of inflation and thus using dollars of constant value) to grow				
decline, or remain roughly the same? (Please choose one of the first three responses a	and enter the %.			
Then provide your rationale in the fourth response area.)				
Inflation-adjusted average				
Inflation-adjusted average annual decline (%)				
Remain the same (enter the number 0)				
Please provide a general rationale for your estimate.]			

Please click "Done" when you are ready to submit your responses.

You Have Completed the Survey. Thank You!