July 8, 2015

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
Studying the Economic Impact of Documentary Standards

EXECUTIVE SUMMARY

• **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)

• **Funding Opportunity Title:** Studying the Economic Impact of Documentary Standards

• **Announcement Type:** Initial

• **Funding Opportunity Number:** 2015-NIST-TPO-02

• **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.620 Science, Technology, Business and/or Education Outreach

• **Dates:** Electronic applications must be received by NIST no later than 11:59 p.m. Eastern Time, Monday, August 24, 2015. Paper applications must be received by NIST by 5:00 p.m. Eastern Time, Monday, August 24, 2015. Applications received after the respective deadlines will not be reviewed or considered. The earliest anticipated start date for awards under this FFO is expected to be approximately February 2016.

When developing your submission timeline, keep in mind that (1) a free annual registration process in the electronic System for Award Management (SAM) (see Section IV.3. of this FFO) may take between three and five business days or as long as more than two weeks, and (2) applicants using Grants.gov will receive a series of e-mail notifications over a period of up to two business days before learning via a validation or rejection whether a Federal agency’s electronic system has received its application. **Please note that a federal assistance award cannot be issued if the designated recipient’s registration in the System for Award Management (SAM.gov) is not current at the time of the award.**

• **Application Submission Address:** See Section IV. in the Full Announcement Text of this FFO.

• **Funding Opportunity Description:** NIST invites applications from eligible applicants to develop and disseminate data and tools to assess the economic impact of documentary standards. The awardee will collaborate with NIST to understand and empirically assess the role of various organizations, including standards developing organizations, in standards development and analyze the impacts that documentary standards have on U.S. economic activity and innovation.
• **Anticipated Funding Amounts:** NIST anticipates funding one multi-year project with a total budget of approximately $150,000 and an overall performance period of up to three (3) years. Initial NIST funding that may be obligated under this announcement is approximately $50,000 for the first year. The project may be continued for up to an additional two years at a funding level of up to approximately $100,000, subject to the multi-year funding policy described in Section II.2. of this FFO.

• **Funding Instrument:** Cooperative Agreement

• **Who Is Eligible:** Eligibility for all programs listed in this FFO is unrestricted, that is, open to all non-Federal entities. Eligible applicants include accredited institutions of higher education; non-profit organizations; commercial organizations incorporated in the United States; and state, local, territorial and Indian tribal governments within the United States. While a non-governmental applicant must be incorporated in the United States, the applicant may have a parent organization outside the United States.

• **Cost Sharing Requirements:** This program does not require cost sharing.

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**FULL ANNOUNCEMENT TEXT**

### I. Program Description

The statutory authority for the Studying the Economic Impact of Documentary Standards program is 15 U.S.C. § 272(b) and (c).

Documentary standards are a powerful force in the protection of public health, safety, and the environment; the development and commercialization of new technologies; and the facilitation of national and international commerce. Researchers have linked data provided by both U.S. (e.g., Rysman and Simcoe (2007)\(^1\) and Simcoe (2012)\(^2\)) and European (see Blind (2004)\(^3\) for a review) standards development organizations (SDOs). This literature has examined both the determinants of participation and performance of SDOs, as well as the economic impact of the standards promulgated by these organizations. This literature has also examined the impact of standards on competition, trade, technological development and economic growth. Further, Blind (2004)\(^4\) has examined the impacts of standards at industry and national levels. However, there are three significant issues.

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\(^3\) The Economics of Standards: Theory, Evidence, Policy. Edward Elgar, Northampton, Massachusetts.
First, very little of the research—particularly as it relates to the impact of documentary standards—is done within the context of the U.S. economy. Secondly, much of the empirical literature is separated from the analysis of underlying market failures that may drive the economic need for standards (Simcoe (2012) is a notable exception and explicitly considers the role of network externalities). Finally, none of the literature examines the role and impact of government investment in standards activities. It has been noted that varied market failures that create the opportunity for government intervention to increase efficiency as well as the differing impacts of different “types” of standards on the timing and impact of standards on economic performance and technological development. However, these insights have not impacted the empirical literature. Even leading practitioners within this field point to the fact that research has become “stale”.

Understanding the role and impact of documentary standards in the U.S. is a complicated endeavor. The U.S. standardization structure is highly decentralized. While fewer than 20 SDOs generate the vast majority of U.S. documentary standards, in total there are approximately 50,000 current voluntary standards that have been developed by more than 600 organizations. These organizations represent the interests of over 100,000 domestic businesses. However, the majority of prior research on the role and impact of documentary standards has not focused on U.S. standards but rather those from countries that typically have a single national documentary standards entity. NIST and the U.S. standards community are interested in filling this gap by supporting research analyzing the impact of documentary standards on the U.S. economy.

The awardee will collaborate with NIST to promote graduate research, develop and disseminate data on documentary standards development and usage, understand and empirically assess the role of various organizations in standards development and, more importantly, analyze the impacts that documentary standards have on U.S. economic activity and innovation. Ultimately, this collaboration will advance the frontier of research on the economic impacts of documentary standards.

Specifically, the awardee, in collaboration with NIST, will sponsor graduate research, develop a technology infrastructure equipped with data, functional tools, such as economic models, that will be deployed as part of the project and evaluate information on the development and use of documentary standards by U.S. businesses and organizations, including governmental organizations. NIST will favorably consider applications that include approaches in their tools to examine relationships between documentary standards data and U.S. economic data, which will offer insight into the economic impact of documentary standards on the U.S. economy and innovation. NIST also will positively regard applications that consider approaches to conduct the systematic empirical analyses of the role of organizations, including government organizations and businesses, on the performance and impact of documentary standards in the U.S. economy. This approach should include the capability to examine

4 Ibid.
federal laboratory technology transfer activities and should include approaches to disseminate results.

In collaboration with NIST, the awardee will leverage academic infrastructure and public dissemination network necessary to effectively sponsor and oversee graduate and post-doctoral research. The awardee will work with NIST to develop and disseminate novel data infrastructure on documentary standards and their usage. Under this program, the awardee will perform, on a cost reimbursement basis, cutting edge research and promote the development of a next generation of researchers focused on critical issues associated with the economic impacts of documentary standards.

The awardee will have the opportunity to significantly advance the state of knowledge in a critical area of national interest. Filling gaps in information about documentary standards could provide understanding that leads to substantial public benefits in public health, safety, the environment, new technologies, and facilitation of commerce.

II. Federal Award Information

1. **Funding Instrument.** The funding instrument that will be used is a cooperative agreement. The nature of NIST’s “substantial involvement” will generally be collaboration between NIST and the recipient organizations. This includes NIST collaboration with a recipient on the scope of work. Additional forms of substantial involvement that may arise are described in Chapter 5.C of the Department of Commerce (DoC) Grants and Cooperative Agreements Manual, which is available at [http://go.usa.gov/SNJd](http://go.usa.gov/SNJd). Please note the DoC Grants and Cooperative Agreements Manual is expected to be updated after publication of this funding announcement and before October 1, 2015. Refer to Section VII. of this FFO, Federal Awarding Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information.

2. **Multi-Year Funding Policy.** When an application for a multi-year award is approved, funding will usually be provided for only the first year of the project. Recipients will be required to submit detailed budgets and budget narratives prior to the award of any continued funding. Continued funding for the remaining years of the project will be awarded by NIST on a non-competitive basis, and may be adjusted higher or lower from year-to-year of the award, contingent upon satisfactory performance, continued relevance to the mission and priorities of the program, and the availability of funds. Continuation of an award to extend the period of performance and/or to increase or decrease funding is at the sole discretion of NIST.

3. **Funding Availability.** NIST anticipates funding one multi-year project with a budget and performance period of up to three (3) years for up to approximately $150,000, subject to the availability of funds. Initial funding that may be obligated under this announcement is approximately $50,000, for the first year. The project may be
continued for up to an additional year at a level of up to approximately $50,000, subject to the multi-year funding policy described in Section II.2. of this FFO.

III. Eligibility Information

1. Eligible Applicants. Eligibility for all programs listed in this FFO is unrestricted, that is, open to all non-Federal entities. Eligible applicants include accredited institutions of higher education; non-profit organizations; and commercial organizations incorporated in the United States; and state, local, territorial and Indian tribal governments within the United States. While a non-governmental applicant must be incorporated in the United States, the applicant may have a parent organization outside the United States.

2. Cost Sharing or Matching Requirement: This program does not require cost sharing.

IV. Application and Submission Information

1. Address to Request Application Package. The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at www.grants.gov. Applicants may also request an application package by contacting the NIST personnel listed below.

Gary Anderson, National Institute of Standards and Technology, 100 Bureau Drive, Mailstop 4700, Gaithersburg, MD, 20899-6200. Phone: (301) 975-5238; e-mail: gary.anderson@nist.gov.

2. Content and Format of Application Submission

a. Required Forms and Documents

(1) **SF-424, Application for Federal Assistance.** The SF-424 must be signed by an authorized representative of the applicant organization.

   SF-424, Item 12, should list the FFO number 2015-NIST-TPO-02.

   SF-424, Item 18, should list the total budget information for the duration of the project.

   The list of certifications and assurances referenced in Item 21 of the SF-424 is contained in the SF-424B.

(2) **SF-424A, Budget Information – Non-Construction Programs.** The budget should reflect anticipated expenses for each year of the project, considering
all potential cost increases, including cost of living adjustments.

(3) **SF-424B, Assurances – Non-Construction Programs**

(4) **CD-511, Certification Regarding Lobbying**

(5) **SF-LLL, Disclosure of Lobbying Activities (if applicable)**

(6) **Technical Proposal.** The Technical Proposal is a word-processed document of no more than twenty five (25) pages responsive to the program description (see Section I. of the FFO) and the evaluation criteria (see Section V.1. of the FFO). It should contain the following information:

a. **Technical Data Infrastructure Development.** A description of the applicant’s approach to implement the appropriate data elements, tools, and infrastructure to accurately assess the impact of documentary standards as described in Section I. of this FFO. Applicants should explain clearly how their approach will address the activities of standards development organizations and explain how their approach will assess how documentary standards developed by standards development organizations affect U.S. economic activity.

   This section should address the Technical Data Infrastructure Development evaluation criterion (see Section V.1.a. of this FFO).

b. **Conduct of Systematic Empirical Analyses of Documentary Standards Impacts.** A description of the applicant’s approach to conduct the systematic empirical analyses of the role of organizations, including government organizations and businesses, on the performance and impact of documentary standards in the U.S. economy. The proposed approach should include the capability to examine the impacts of federal laboratory technology transfer activities and the impact documentary standards may have on these activities. This section should explain how the applicant’s analyses may contribute to future standards development, usage and impact as well as how the analyses may contribute to pushing the frontier of economic research on documentary standards impacts.

   This section should address the Conduct of Systematic Empirical Analyses of Documentary Standards Impacts evaluation criterion (see Section V.1.b. of this FFO).

c. **Dissemination Plan.** A description of the applicant’s approach to disseminate the proposed project’s: (1) technology infrastructure, tools, and input and output data from the empirical analyses of documentary standards impacts; (2) information on documentary standards, including
their adoption and use; and (3) results through the publication of papers in peer-reviewed literature.

This section should address the Dissemination Plan evaluation criterion (see Section V.1.c. of this FFO).

d. Graduate and Post-Graduate Research. A description of the applicant’s approach to sponsor graduate and post-doctoral research in collaboration with NIST. This section should explain how the applicant will identify and support graduate and post-doctoral researchers as well as discuss the skills and experience of senior researchers in performing and supervising research related to documentary standards. The Research Plan should include a discussion of the project’s potential to significantly impact the frontier of research related to documentary standards and promote the development of researchers focused on this critical issue.

This section should address the Graduate and Post-Doctoral Research evaluation criterion (see Section V.1.d. of this FFO).

(7) Budget Narrative. In addition to the SF-424A, applicants should provide a detailed budget narrative that fully explains and justifies all proposed project funding for all years in accordance with applicable federal cost principles set forth in 2 C.F.R. Part 200 Subpart E. In this narrative, the recipient should provide adequate information to support the costs identified in each budget category for each year of the project with justification to make it clear that the budget is realistic and appropriate to meet the project objectives and time frame.

The Budget Narrative should address the Project Costs evaluation criterion (see Section V.1.e. of this FFO).

(8) Indirect Cost Rate Agreement. If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal audit agency. If the rate was not established by a cognizant Federal audit agency, provide a statement to this effect. If the successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate in accordance with the Department of Commerce Financial Assistance Standard Terms and Conditions available at: http://go.usa.gov/hKbj.

Alternatively, in accordance with 2 C.F.R. § 200.414(f), applicants that have never received a negotiated indirect cost rate may elect to charge indirect costs to an award pursuant to a de minimis rate of 10 percent of modified total direct costs (MTDC), in which case a negotiated indirect cost rate agreement is not required. Applicants proposing a 10 percent de minimis
rate pursuant to 2 C.F.R. § 200.414(f) should note this election as part of the budget portion of the application.

If submitting the application electronically via Grants.gov, items IV.2.a.(1) through IV.2.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. Items IV.2.a.(6) through IV.2.a.(8) must be completed and attached by clicking on “Add Attachments” found in item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov.

Applicants should carefully follow specific Grants.gov instructions at www.grants.gov to ensure the attachments will be accepted by the Grants.gov system. **A receipt from Grants.gov indicates only that an application was transferred to a system. It does not provide details concerning whether all attachments (or how many attachments) transferred successfully.** Applicants using Grants.gov will receive email notifications over a period of up to two business days as the application moves through intermediate systems before the applicant learns via a “validation” or a rejection notification whether NIST has received the application. Validation completes the submission process.

If submitting an application by paper, all of the required documents should be submitted in the order listed above.

b. Application Format

(1) **E-mail and facsimile (fax) submissions.** Will not be accepted.

(2) **Number of paper copies.** For paper submissions, one (1) signed stapled original and two (2) stapled copies. If the original proposal is in color, the two (2) copies must also be in color. **If submitting electronically via Grants.gov, paper copies are not required.**

(3) **Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation.

(4) **Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.

(5) **Line spacing.** Applicants may use single spacing or double spacing.

(6) **Margins.** One (1) inch top, bottom, left, and right.

(7) **Page layout.** Portrait orientation except for figures, graphs, images, and pictures.
(8) **Page limit.** The Technical Proposal is limited to twenty-five (25) pages.

   a. **Page limit includes:** Table of contents (if included), Technical Proposal, figures, graphs, tables, images, and pictures.

   b. **Page limit excludes:** SF-424, Application for Federal Assistance; the SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying, Budget Narrative; and Indirect Cost Rate Agreement, if applicable.

(9) **Page numbering.** Number pages sequentially.

(10) **Page size.** 21.6 centimeters by 27.9 centimeters (8 ½ inches by 11 inches).

(11) **Language.** English.

(12) **Staple paper submission.** For paper submissions, staple the original signed proposal and each of the two (2) copies securely with one (1) staple in the upper left-hand corner.

(13) **Typed document.** All applications, including forms, must be typed; handwritten applications and forms will not be accepted.

c. **Application Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline.

d. **Pre-Applications.** NIST is not accepting pre-applications or white papers under this FFO.

e. **Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns.** In accordance with Federal appropriations law, an authorized representative of the selected applicant(s) may be required to provide certain pre-award certifications regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns.

3. **Unique Entity Identifier and System for Award Management (SAM).** Pursuant to 2 C.F.R. part 25, each applicant and recipient (as the case may be) is required to: (i) be registered in SAM before submitting its application; (ii) provide a valid unique entity identifier in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency, unless otherwise excepted from these requirements pursuant to 2 C.F.R. § 25.110.
NIST will not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time NIST is ready to make a Federal award pursuant to this FFO, NIST may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

4. Submission Dates and Times. Electronic applications must be received by NIST no later than 11:59 p.m. Eastern Time, Monday, August 24, 2015. Paper applications must be received by NIST by 5:00 p.m. Eastern Time, Monday, August 24, 2015. Applications received after the respective deadline will not be reviewed or considered. The earliest anticipated start date for awards under this FFO is expected to be approximately February 2016.

NIST determines whether paper applications have been timely received by the deadline by the date and time they are physically received by NIST at its Gaithersburg, Maryland campus. For electronic applications, the date and time stamped on the validation generated by www.grants.gov will be considered the official time that the application was received by NIST. Applicants are cautioned that the validation process may take up to two full business days after the application is submitted to www.grants.gov.

NIST strongly recommends that applicants do not wait until the last minute to submit an application. NIST will not make allowance for any late submissions. To avoid any potential processing backlogs due to last minute Grants.gov registrations, applicants are highly encouraged to begin their Grants.gov registration process early.

When developing your submission timeline, keep in mind that (1) a free annual registration process in the electronic System for Award Management (SAM) (see Section IV.3. of this FFO) may take between three and five business days or as long as more than two weeks, and (2) applicants using Grants.gov will receive a series of e-mail notifications over a period of up to two business days before learning via a validation or rejection whether a Federal agency’s electronic system has received its application.

5. Intergovernmental Review. Applications under this Program are not subject to Executive Order 12372.

6. Funding Restrictions. Profit or fee is not an allowable cost.

7. Other Submission Requirements

a. Applications may be submitted by paper or electronically.

   (1) Paper applications must be submitted in triplicate (an original and two copies) and
submitted to the NIST personnel listed below.

Gary Anderson, National Institute of Standards and Technology, 100 Bureau Drive, Mailstop 4700, Gaithersburg, MD, 20899-6200.


a) Applicants should carefully follow specific Grants.gov instructions to ensure that all attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2015-NIST-TPO-02 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov.

b) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a valid unique entity identifier number and must maintain a current registration in the Federal government’s primary registrant database, the System for Award Management (https://www.sam.gov/), as explained on the Grants.gov Web site. See also Section IV.3. of this FFO. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only authorized individual(s) will be able to submit the application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U.S. territory, please call 800-518-4726. If calling from a place other than the United States or a U.S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact support@grants.gov.

c) To find instructions on submitting an application on Grants.gov, Applicants should refer to the “Applicants” tab in the banner just below the top of the www.grants.gov home page. Clicking on the “Applicants” tab produces the “Grant Applicants” page.
In addition to following the “Steps” and instructions described in the “Applicant Actions” section and its sub-categories, further detailed instructions are described in “Applicant Resources” and all of its subcategories. This appears in the box near the top left of the Grant Applicants page. Applicants should follow the links associated with each subcategory.

Applicants will receive a series of receipts during a process of up to two business days before the application is either validated as electronically received by the Federal agency system, or rejected by it. Closely following the detailed information in these subcategories will increase the likelihood of acceptance of the application by the Federal agency’s electronic system.

The application must be both received and validated by Grants.gov. The application is “received” when Grants.gov provides the applicant with a confirmation of receipt and an application tracking number. If the applicant does not see this confirmation and tracking number, the application has not been received. After the application has been received, it must still be validated. During this process, it may be “validated” or “rejected with errors.” To know whether the application was rejected with errors and the reasons why, the applicant must log in to Grants.gov, select “Applicants” from the top navigation, and select “Track my application” from the drop-down list. If the status is “rejected with errors,” the applicant may still seek to correct the errors and resubmit the application before the deadline. If the applicant does not correct the errors, the application will not be forwarded to NIST by Grants.gov.

Applicants should pay close attention to the instructions under “Applicant FAQs,” as it contains information important to successful submission on Grants.gov, including essential details on the naming conventions for attachments to Grants.gov applications.

All applicants, both electronic and paper submitters, should be aware that adequate time must be factored into applicants’ schedules for delivery of their application. Submitters of electronic applications are advised that volume on Grants.gov may be extremely heavy leading up to the deadline date, and if Grants.gov is unable to accept applications electronically in a timely fashion, applicants are encouraged to exercise their option to submit applications in paper format. Submitters of paper applications should allow adequate time to ensure a paper application will be received on time, taking into account that Federal Government security screening for U.S. Postal Service mail may delay receipt of mail for up to two (2) weeks and that guaranteed express mail carriers and/or couriers are not always able to fulfill their guarantees.
Refer to important information in Section IV.4. Submission Dates and Times, to help ensure your application is received on time.

b. Amendments. Any amendments to this FFO will be announced through Grants.gov. Applicants may sign up for Grants.gov FFO amendments or may request copies from Gary Anderson by telephone at (301) 975-5238; or email: gary.anderson@nist.gov.

V. Application Review Information

1. Evaluation Criteria. The evaluation criteria that will be used in evaluating applications are as follows:

   a. Technical Data Infrastructure Development (0 – 35 points). Reviewers will evaluate the extent to which the applicant’s proposed project clearly addresses the program goals (see Section I. of this FFO) and demonstrates how the applicant will efficiently and effectively identify and implement the appropriate data elements, tools, and infrastructure to accurately assess the impact of documentary standards. Reviewers also will evaluate the extent to which the applicant’s approach enables an examination of how documentary standards developed by standards development organizations affect U.S. economic activity.

   b. Conduct of systematic empirical analyses of documentary standards impacts (0 – 35 points). Reviewers will evaluate the extent to which the applicant’s approach enables the conduct of systematic empirical analyses of the role of organizations, including government organizations and businesses, on the performance and impact of documentary standards in the domestic economy. Reviewers will also evaluate the applicant’s approach to examining the impacts of federal laboratory technology transfer activities. In addition, reviewers will assess the extent to which the analyses will contribute to future standards development, usage and impact as well the extent to which the analyses will contribute to the frontier of economic research on documentary standards impacts.

   c. Dissemination Plan (0 – 10 points). Reviewers will evaluate the applicant’s dissemination plan for: (1) the soundness and reasonableness of the approach to disseminating the project’s technology infrastructure, tools, and input and output data from the empirical analyses of documentary standards impacts; (2) the quality and effectiveness of the approach to disseminating information on documentary standards, including their adoption and use; and (3) the quality and effectiveness of the approach to publishing results in the form of papers in peer-reviewed literature.

   d. Graduate and Post-Graduate Research. (0-10 Points) Reviewers will evaluate the quality of the applicant’s approach to sponsoring graduate and post-doctoral research. Reviewers will further evaluate the extent to which senior researchers have the skill and experience to supervise cutting edge empirical research related to
the economic impact of documentary standards. Finally, reviewers will assess the potential of the proposed work to significantly impact the frontier of research regarding the economic analysis of documentary standards and their impacts.

e. **Project Costs (0 – 10 points).** Reviewers will evaluate the proposed budget to determine if it is realistic and appropriate to meet the project objectives and time-frame.

2. **Selection Factors.** The Selecting Official will select an application based upon the rank order of the applications (see Section V.3.b. of this FFO) and may select an application out of rank order based on one or more of the following selection factors:

a. results of the reviewers’ evaluations,

b. relevance to the objectives described in Section I. of this FFO, and

c. the availability of funds.

3. **Review and Selection Process**

a. **Initial Administrative Review of Proposals.** An initial review of timely received applications will be conducted to determine eligibility, completeness, and responsiveness to this FFO and the scope of the stated program objectives. Applications determined to be ineligible, incomplete, and/or non-responsive may be eliminated from further review. However, NIST, in its sole discretion, may continue the review process for an application that is missing non-substantive information that can easily be rectified or cured.

b. **Review of Eligible, Complete, and Responsive Proposals.** At least three (3) independent, objective individuals knowledgeable about the particular area described in the application will conduct a technical review of each application, based on the evaluation criteria (see Section V.1. of this FFO). If non-federal reviewers are used, the reviewers may discuss the applications with each other, but scores will be determined on an individual basis, not as a consensus. Based on the reviewers’ scores, a final rank order will be prepared and provided to the Selecting Official for further consideration.

The Selecting Official, who is the Director of the Technology Partnerships Office, or designee, will then select a funding recipient based on the rank order. The Selecting Official may select an application out of rank order based upon the selection factors in Section V.2. of this FFO.

NIST reserves the right to negotiate the budget costs with the applicant that has been selected to receive an award, which may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant modify objectives or work plans and provide supplemental information required by the
agency prior to award. NIST also reserves the right to reject an application where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select some, all, or none of the applications, or part(s) of any particular application. The final approval of selected applications and issuance of awards will be by the NIST Grants Officer. The award decisions of the NIST Grants Officer are final.

c. **Federal Awarding Agency Review of Risk Posed by Applicants.** After applications are proposed for funding by the Selecting Official and prior to the issuance of an award, the NIST Grants Management Division will conduct an assessment of the risk posed by the applicant in accordance with 2 C.F.R. § 200.205. In addition to reviewing repositories of government-wide eligibility, qualification or financial integrity information, the risk assessment conducted by NIST may consider items such as the financial stability of an applicant, quality of the applicant’s management systems, an applicant’s history of performance, previous audit reports and audit findings concerning the applicant and the applicant’s ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Upon review of these factors, if appropriate, specific award conditions that correspond to the degree of risk may be applied by the NIST Grants Officer pursuant to 2 C.F.R. § 200.207. In addition, NIST reserves the right to reject an application in its entirety where information is uncovered that raises a significant risk with respect to the responsibility or suitability of the applicant.

4. **Anticipated Announcement and Award Dates.** The earliest anticipated start date for awards under this FFO is expected to be approximately February 2016.

5. **Additional Information.** Proposals, reports, documents and other information related to applications submitted to NIST and/or relating to financial assistance awards issued by NIST will be reviewed and considered by Federal employees, Federal agents and contractors, and/or by non-Federal personnel who enter into nondisclosure agreements covering such information, when applicable.

a. **Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.

b. **Retention of Unsuccessful Applications.** A copy of each non-selected application will be retained for three (3) years for record keeping purposes. After three (3) years, it will be destroyed.

VI. **Federal Award Administration Information**

1. **Federal Award Notices.** Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at [http://go.usa.gov/SNMR](http://go.usa.gov/SNMR).
2. Administrative and National Policy Requirements


b. Department of Commerce Financial Assistance Standard Terms and Conditions. The Department of Commerce will apply the Financial Assistance Standard Terms and Conditions dated December 26, 2014 to this award. If the Department of Commerce publishes revised Standard Terms and Conditions prior to issuance of awards under this FFO, the revised Standard Terms and Conditions will apply. Refer to Section VII. of this FFO, Federal Awarding Agency Contacts, Grant Rules and Regulations, if you need more information.

c. Department of Commerce Pre-Award Notification Requirements. The Department of Commerce will apply the Pre-Award Notification Requirements for Grants and Cooperative Agreements dated December 30, 2014 (79 FR 78390). If the Department of Commerce publishes revised Pre-Award Notification Requirements prior to issuance of awards under this FFO, the revised Pre-Award Notification Requirements will apply. Refer to Section VII. of this FFO, Federal Awarding Agency Contacts, Grant Rules and Regulations, if you need more information.

d. Funding Availability and Limitation of Liability. Funding for the program listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or the Department of Commerce be responsible for application preparation costs if this program fails to receive funding or is cancelled because of agency priorities. Publication of this FFO does not oblige NIST or the Department of Commerce to award any specific project or to obligate any available funds.

e. Collaborations with NIST Employees. All applications should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget. If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the application prior to the merit review. Any collaboration with an identified NIST employee that is approved by appropriate NIST management will not make an application more or less favorable in the competitive process.
f. **Use of NIST Intellectual Property.** If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 2 C.F.R. § 200.315, and in Section D.03 of the DoC Financial Assistance Terms and Conditions dated December 26, 2014, found at [http://go.usa.gov/hKbj](http://go.usa.gov/hKbj). Questions about these requirements may be directed to Chief Counsel for NIST, (301) 975-2803, nistcounsel@nist.gov.

Any use of NIST-owned intellectual property by an applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

g. **Research Activities Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any application that includes research activities involving human subjects, human tissue/cells, or data or recordings involving human subjects, including software testing, must satisfy the requirements of the Common Rule for the Protection of Human Subjects (“Common Rule”), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. Research activities involving human subjects who fall within the classes of subjects found in 45 C.F.R. Part 46, Subparts B, C and D must satisfy the requirements of the applicable subpart. In addition, any such application that includes research activities on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant’s activities include research involving human subjects. NIST policy also requires a NIST administrative review for research involving human subjects approved by a non-NIST Institutional Review Board (IRB). (15 C.F.R. § 27.112 Review by Institution.) If NIST determines that an application includes research...
activities which involve human subjects, the applicant will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred for those activities under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

Organizations that have an IRB are required to follow the procedures of their organization for approval of exempt and non-exempt research activities that involve human subjects, if the application is funded. Both domestic and foreign organizations performing non-exempt research activities involving human subjects will be required to have protocols approved by a cognizant, active IRB currently registered with the Office for Human Research Protections (OHRP) within the DHHS that is linked to the engaged organizations. All engaged organizations must possess a currently valid Federalwide Assurance (FWA) on file from OHRP. Information regarding how to apply for an FWA and register an IRB with OHRP can be found at http://www.hhs.gov/ohrp/assurances/index.html. NIST relies only on OHRP-issued FWAs and IRB Registrations for both domestic and foreign organizations for NIST supported research involving human subjects. NIST will not issue its own FWAs or IRB Registrations for domestic or foreign organizations.

The applicant should clearly indicate in the application, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted, and which institutions are expected to be engaged in the research activities.

If an activity/task involves data obtained through intervention or interaction with living individuals or identifiable private information obtained from or about living individuals but the applicant participant(s) believes that the activity/task is not research as defined under the Common Rule, the following information may be requested for that activity/task:

(1) Justification, including the rationale for the determination and in some cases additional documentation, to support a determination that the activity/task in the application is not research as defined in the Common Rule. See 15 C.F.R. § 27.102 Definitions.

(2) If the applicant participant(s) uses a cognizant IRB that provides a determination that the activity/task is not research, a copy of that determination documentation will be required by NIST. The applicant participant(s) is not required to establish a relationship with a cognizant IRB if they do not have one, but if the applicant participant(s) has a cognizant IRB that requires review of the activity/task, or the applicant participant(s) elects to obtain IRB review, a copy of the IRB approval/determination documentation will be required by NIST.
NIST will review the information submitted and may coordinate further with the applicant before determining whether the activity/task will be defined as research for purposes of implementing the Common Rule in the applicable NIST financial assistance program or project.

If the application appears to NIST to include exempt research activities, and the performer of the activity or the supplier and/or the receiver of the biological materials or data from human subjects does not have a cognizant IRB to provide an exemption determination, the following information may be requested during the review process so that NIST can evaluate whether an exemption under the Common Rule applies (see 15 C.F.R. § 27.101 To what does this policy apply?):

(1) The name(s) of the institution(s) where the exempt research will be conducted; and/or from which biological materials or data from human subjects will be provided.
(2) A copy of the protocol for the research to be conducted; and/or the biological materials or data from human subjects to be collected/provided, not pre-existing samples (i.e., will proposed research collect only information without personal identifiable information, will biological materials or data be de-identified and when and by whom was the de-identification performed, how were the materials or data originally collected).
(3) For pre-existing biological materials or data from human subjects, provide copies of the consent forms used for collection and a description of how the materials or data were originally collected and stripped of personal identifiers. If copies of consent forms are not available, explain.
(4) Any additional clarifying documentation that NIST may request during the review process in order to make a determination that the activity/task or use of biological materials or data from human subjects is exempt under the Common Rule (see 15 C.F.R. § 27.101 To what does this policy apply?).

If the application appears to NIST to include research activities (exempt or non-exempt) involving human subjects, and the performer of the activity has a cognizant IRB registered with OHRP, the following information may be requested during the review process:

(1) The name(s) of the institution(s) where the research will be conducted;
(2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
(3) The FWA number of the applicant linked to the cognizant IRB(s);
(4) The FWAs associated with all organizations engaged in the planned research activity/task, linked to the cognizant IRB;
(5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
(6) The IRB approval date (if currently approved for exempt or non-exempt research);
(7) If any of the engaged organizations has applied for or will apply for an FWA or IRB registration, those details should be clearly provided for each engaged organization.

Additional documentation may be requested by NIST for performers with a cognizant IRB during review of the application, and may include the following for research activities involving human subjects that are planned in the first year of the award:

1. A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
2. A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
3. A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e., biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
4. A brief description of what portions of the IRB submitted protocol are specifically included in the application submitted to NIST, if the protocol includes tasks not included in the application, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non-duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
5. If a new protocol will only be submitted to an IRB if an award from NIST is issued, a draft of the proposed protocol may be requested;
6. Any additional clarifying documentation that NIST may request during the review process to perform the NIST administrative review of research involving human subjects. (See 15 C.F.R. § 27.112 Review by Institution.)

This clause reflects the existing NIST policy for Research Involving Human Subjects. Should the policy be revised prior to award, a clause reflecting the policy current at time of award may be incorporated into the award.

If the policy is revised after award, a clause reflecting the updated policy may be incorporated into the award.

For more information regarding research projects involving human subjects, contact Anne Andrews, Director, NIST Human Subjects Protection Office (e-mail: anne.andrews@nist.gov; phone: (301) 975-5445

3. Reporting
a. **Reporting Requirements.** The following reporting requirements described in Sections A.01 Performance (Technical) Reports and B.02 Financial Reports of the Department of Commerce Financial Assistance Standard Terms and Conditions dated December 26, 2014, [http://go.usa.gov/hKbj](http://go.usa.gov/hKbj), apply to awards in this program:

(1) **Financial Reports.** Each award recipient will be required to submit an SF-425, Federal Financial Report on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period to the NIST Grants Officer and Grants Specialist named in the award documents. A final financial report is due within 90 days after the end of the project period.

(2) **Performance (Technical) Reports.** Each award recipient will be required to submit a technical progress report to the NIST Grants Officer and the Federal Program Officer on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. A final technical report shall be submitted within 90 days after the expiration date of the award. Technical progress reports shall contain information as prescribed in 2 C.F.R. § 200.328.

(3) **Patent and Property Reports.** From time to time, and in accordance with the Uniform Administrative Requirements (see Section VI.2.a. of this FFO) and other terms and conditions governing the award, the recipient may be required to submit property and patent reports.

b. **Audit Requirements.** 2 C.F.R. Part 200, Subpart F, adopted by the Department of Commerce through 2 C.F.R. § 1327.101 requires any non-Federal entity (i.e., including non-profit institutions of higher education and other non-profit organizations) that expends Federal awards of $750,000 or more in the recipient’s fiscal year to conduct a single or program-specific audit in accordance with the requirements set out in the Subpart. Applicants are reminded that NIST, the Department of Commerce Office of Inspector General, or another authorized Federal agency may conduct an audit of an award at any time.

c. **Federal Funding Accountability and Transparency Act of 2006.** In accordance with 2 C.F.R. Part 170, all recipients of a Federal award made on or after October 1, 2010, are required to comply with reporting requirements under the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282). In general, all recipients are responsible for reporting sub-awards of $25,000 or more. In addition, recipients that meet certain criteria are responsible for reporting executive compensation. Applicants must ensure they have the necessary processes and systems in place to comply with the reporting requirements should they receive funding. Also see the Federal Register notice published September 14, 2010, at 75 FR 55663 available here [http://go.usa.gov/hKnQ](http://go.usa.gov/hKnQ).
VII. Federal Awarding Agency Contact(s)

Questions should be directed to the following contact persons:

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<tr>
<th>Subject Area</th>
<th>Point of Contact</th>
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<tr>
<td>Programmatic and Technical Questions</td>
<td>Gary Anderson</td>
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<td></td>
<td>Phone: (301) 975-5238</td>
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<td></td>
<td>E-mail: <a href="mailto:gary.anderson@nist.gov">gary.anderson@nist.gov</a></td>
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<td>Technical Assistance with Grants.gov Submissions</td>
<td>Christopher Hunton</td>
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<td>Phone: (301) 975-5718</td>
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<td>Fax: (301) 975-8884</td>
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<td>E-mail <a href="mailto:christopher.hunton@nist.gov">christopher.hunton@nist.gov</a></td>
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<td>E-mail: <a href="mailto:support@grants.gov">support@grants.gov</a></td>
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<tr>
<td>Grant Rules and Regulations</td>
<td>Husai Rahman</td>
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<td>Phone: (301) 975-4355</td>
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<td>E-mail: <a href="mailto:husai.rahman@nist.gov">husai.rahman@nist.gov</a></td>
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