

NONREIMBURSABLE INTERAGENCY AGREEMENT IA1-35035
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LANGLEY RESEARCH CENTER
AND
INFORMATION TECHNOLOGY LABORATORY OF
THE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
FOR
VERIFICATION OF SOFTWARE AND AUTONOMOUS SYSTEMS

ARTICLE 1. AUTHORITY AND PARTIES

The National Aeronautics and Space Administration Langley Research Center, located at Langley Research Center, Hampton, VA 23681 (hereinafter referred to as "NASA" or "NASA LaRC") and the Information Technology Laboratory of the National Institute of Standards and Technology (NIST), located at 100 Bureau Drive, Gaithersburg, MD 20899-0003 (hereinafter referred to as "NIST"), enter into this Interagency Agreement (hereinafter referred to as "IAA") in accordance with 51 U.S.C. § 20113(e). NASA and NIST may be individually referred to as a "Party" and collectively referred to as the "Parties."

ARTICLE 2. PURPOSE

LaRC and NIST both conduct research into software verification and autonomy, but this has been done with little cooperation or coordination. The research portfolios of the two organizations are very complementary. The proposed non-reimbursable agreement seeks to improve coordination and cooperation between the two organizations in hopes to prevent gaps in these research focus areas that could inhibit application. The planned activities include regular telcons and annual visits.

ARTICLE 3. ACTIVITIES

A. NASA LaRC will use reasonable efforts to:

1. Collaborate with NIST in planning research on autonomous systems assurance.
2. Collaborate with NIST in planning research on verification and validation (V&V) of software systems.
3. Participate in annual research reviews.
4. Conduct collaborative research on V&V and autonomous systems topics with NIST.
5. Collaborate with NIST on annual reporting of V&V and autonomous systems effort to appropriate research management.

B. NIST will use reasonable efforts to:

1. Collaborate with LARC in planning research on autonomous systems assurance.
2. Collaborate with LARC in planning research on verification and validation (V&V) of software systems.
3. Participate in annual research reviews.
4. Conduct collaborative research on V&V and autonomous systems topics with LARC.
5. Collaborate with LARC on annual reporting of V&V and autonomous systems effort to appropriate research management.

ARTICLE 4. SCHEDULE AND MILESTONES

The planned major milestones for the activities defined in the "Responsibilities" Article are as follows:

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| NASA and NIST shall participate in annual planning of collaborative research on the V&V of software and autonomous systems. | To start within three (3) months of execution of agreement. |
| NASA and NIST shall participate in conducting collaborative research in software V&V and autonomous systems annually. | To start within six (6) months of execution of agreement. |
| NASA and NIST shall participate in Annual Research Reviews | To start within (1) year of the execution of agreement. |
| NASA and NIST shall participate in annual reporting of accomplishments | To start within one (1) year of execution of agreement. |

ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Agreement and each Party will fund its own participation. All activities under or pursuant to this Agreement are subject to the availability of funds, and no provision of this Agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341).

ARTICLE 6. PRIORITY OF USE

Any schedule or milestone in this IAA is estimated based upon the Parties' current understanding of the projected availability of its respective goods, services, facilities, or equipment. In the event that either Party's projected availability changes, NASA or NIST, respectively, shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's and NIST's use of its own goods, services, facilities, or equipment shall have priority over the use planned in this IAA.

ARTICLE 7. LIABILITY AND RISK OF LOSS

Each Party agrees to assume responsibility for its own risks arising from or related to activities conducted under this IAA.

ARTICLE 8. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

NASA and NIST agree that the information and data exchanged in furtherance of the activities under this IAA will be exchanged without use and disclosure restrictions unless required by national security regulations (e.g., classified information) or as otherwise provided in this IAA or agreed to by NASA and NIST for specifically identified information or data (e.g., information or data specifically marked with a restrictive notice).

ARTICLE 9. INTELLECTUAL PROPERTY RIGHTS - INVENTION AND PATENT RIGHTS

Unless otherwise agreed upon by NASA and NIST, custody and administration of inventions made (conceived or first actually reduced to practice) under this IAA will remain with the respective inventing Party. In the event an invention is made jointly by employees of the Parties (including by employees of a Party's contractors or subcontractors for which the U.S. Government has ownership), the Parties will consult and agree as to future actions toward establishment of patent protection for the invention.

ARTICLE 10. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or NIST may, consistent with Federal law and this Agreement, release general information regarding its own participation in this IAA as desired. Insofar as participation of the other Party in this IAA is included in a public release, NASA and NIST will seek to consult with each other prior to any such release, consistent with the Parties' respective policies.

Pursuant to Section 841(d) of the NASA Transition Authorization Act of 2017, Public Law 115-10 (the "NTAA"), NASA is obligated to publicly disclose copies of all agreements conducted pursuant to NASA's 51 U.S.C. §20113(e) authority in a searchable format on the NASA website within 60 days after the agreement is signed by the Parties. The Parties acknowledge that, if this IAA is entered into pursuant to NASA's 51 U.S.C. §20113(e) authority, this IAA will be disclosed, without redaction, in accordance with the NTAA.

ARTICLE 11. TERM OF AGREEMENT

This IAA becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of the activities described above, or five years from the effective date, whichever comes first.

ARTICLE 12. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Agreement by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 13. CONTINUING OBLIGATIONS

The rights and obligations of the Parties as set forth in the provisions "Financial Obligations," "Liability and Risk of Loss," "Intellectual Property Rights - Data Rights," "Intellectual Property Rights - Invention and Patent Rights," "Disclaimer of Warranty," "Dispute Resolution," and "Applicable Law" shall survive such expiration or termination of this Agreement.

ARTICLE 14. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Agreement.

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| Management Points of Contact | |
| <u>NASA Langley Research Center</u> Jennifer Hubble Viudez Center Agreements Manager Mail Stop: 264 Langley Research Center Hampton, VA 23681 Phone: 757-864-5627 Fax: Unknown jennifer.m.hubble@nasa.gov | <u>National Institute of Standards and Technology (NIST)</u> Matthew Scholl Chief, Computer Security Division 100 Bureau Drive Gaithersburg, MD 20899-0003 Phone: 301-975-2941 Fax: Unknown |
| Technical Points of Contact | |
| <u>NASA Langley Research Center</u> Alwyn E. Goodloe Research Computer Engineer Langley Research Center Hampton, VA 23681 Phone: 804-690-5478 a.goodloe@nasa.gov | <u>National Institute of Standards and Technology (NIST)</u> Rick Kuhn Computer Scientist 100 Bureau Drive Gaithersburg, MD 20899-0003 d.kuhn@nist.gov |

ARTICLE 15. DISPUTE RESOLUTION

All disputes concerning questions of fact or law arising under this IAA shall be referred by the claimant in writing to the appropriate person identified in this IAA as the "Points of Contact." The persons identified as the "Points of Contact" for NASA and NIST will consult and attempt to resolve all issues arising from the implementation of this IAA. If they are unable to come to agreement on any issue, the dispute will be referred to the signatories to this IAA, or their designees, for joint resolution after the Parties have separately documented in writing clear reasons for the dispute. As applicable, disputes will be resolved pursuant to The Department of the Treasury's Intragovernmental Transaction Guide (Treasury Financial Manual, Vol. 1, Chapter 2, Part 4700, Appendix 10 (hereinafter, the "Intragovernmental Transaction Guide")).

ARTICLE 16. MODIFICATIONS

Any modification to this IAA shall be executed, in writing, and signed by an authorized representative of NASA and the NIST.

ARTICLE 17. APPLICABLE LAW

U.S. Federal law governs this IAA for all purposes, including, but not limited to, determining the validity of the IAA, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

ARTICLE 18. LOAN OF NASAPROPERTY

In the event that the Parties agree to a loan of NASA Property to NIST, the parties shall enter into a NASA Form 893, Loan of NASA Equipment, for NASA equipment loaned to Partner.

ARTICLE 19. SIGNATORY AUTHORITY


Approved and authorized on behalf of each Party by:

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
LANGLEY RESEARCH CENTER

BY: _____
Mary DiJoseph
Director, Aeronautics Research
Directorate

DATE: _____

NATIONAL INSTITUTE OF
STANDARDS AND TECHNOLOGY
(NIST)

BY: _____

Jim St Pierre
Acting Director
Information Technology Lab

DATE: _____