

MEMORANDUM OF UNDERSTANDING

between

the DEPARTMENT OF THE ARMY

and

the NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

concerning

COLLABORATIVE RESEARCH IN AERONAUTICS

I. PURPOSE

This Memorandum of Understanding (MOU) establishes a collaborative agreement between the Department of the Army (DA) and the National Aeronautics and Space Administration (NASA), hereinafter known as the "Parties." The primary goal of this collaboration is to facilitate the coordination of research efforts between the two organizations in the areas of rotorcraft aeronautics, including rotorcraft flight dynamics and control, rotorcraft vehicle structures, rotorcraft propulsion, rotorcraft avionics, rotorcraft aeromechanics, and rotorcraft safety and airspace management. Fundamental to this agreement is the understanding that the Army and NASA will define and execute their own focused programs incorporating, as appropriate, common research and development (R&D) covered by this MOU. The intent of this MOU is to establish a collaboration that results in the sharing of relevant technical information, experimental data, software technology, and designs generated by the DA and NASA's programs. This MOU describes the objectives and responsibilities for agreed-upon common rotorcraft research interests. This partnership builds upon a long-standing relationship between the DA and NASA.

II. BACKGROUND

For over 40 years, the DA and NASA have collaboratively conducted research to enable the design of advanced rotorcraft systems. Significant research and engineering efforts have been pursued, resulting in advancement in the state of the art for many fundamental rotorcraft technologies.

The DA is interested in developing aviation technology to enhance performance, survivability, and lethality and to lower operations and maintenance costs of advanced manned and unmanned military rotorcraft systems used for the protection of the Nation.

The aeronautics research conducted by NASA focuses on advancing the state of knowledge and capabilities in aeronautics for the benefit of the broader aeronautics community.

The collaborative agreement outlined in this MOU supports all of the above interests, focusing on opportunities that support common areas of interest in rotorcraft aeronautics technologies.

III. EXISTING AGREEMENTS

This MOU replaces the previous agreement between the Parties entitled "Agreement Between the National Aeronautics and Space Administration and the United States Army Materiel Command (AMC) for Joint Participation in Aeronautical Technology for the 21st Century" (referred to as the "Master Agreement"). Accordingly, Center Operating Agreements (COA) that were developed under the Master Agreement are no longer in effect.

In place of the Master Agreement, this MOU provides for the establishment of collaborative research between the Parties and supersedes any preceding agreements in place that address collaborative research between the Parties. All collaborative aeronautics research between NASA and the DA, with the exception of strictly reimbursable agreements, will be coordinated through NASA's Aeronautics Research Mission Directorate and the Office of the Deputy Assistant Secretary of the Army for Research and Technology (ODASA(R&T)).

Future agreements similar to the COA between NASA and the DA will entail only administrative and facility support issues related to DA personnel based at NASA Research Centers and will not involve programmatic issues such as research collaborations, technical program reviews, or research prioritization.

IV. OBJECTIVES

The objective of this MOU is to establish collaboration guidelines between the Parties to work in the best interest of the Nation to further R&D in rotorcraft aeronautics in the following key areas: (a) rotorcraft flight dynamics and control, (b) rotorcraft vehicle structures, (c) rotorcraft propulsion, (d) rotorcraft avionics, (e) rotorcraft aeromechanics, (f) rotorcraft safety, and (g) rotorcraft air space management. Under this MOU, both Parties agree to:

- Include the other Party in its major program reviews related to rotorcraft aeronautics research.
- Work with the other Party to develop research strategies that avoid duplication of research efforts.
- Share research data and software development when security guidelines permit.
- Assist the other Party as needed in program peer reviews and program/proposal evaluations.

Detailed agreements between the Parties may be established for specific collaborative efforts in the future as the need arises. These agreements will address issues such as technical objectives, personnel, and funding.

Executive direction and oversight will be provided through the process outlined in Section V below.

V. EXECUTIVE RESEARCH COMMITTEE

The Executive Research Committee (ERC) shall be responsible for the executive direction and oversight of the DA and NASA joint rotorcraft aeronautics R&D efforts. The Deputy Assistant Secretary of the Army for Research and Technology (DASA(R&T)) and the NASA Associate Administrator for Aeronautics Research Mission Directorate shall select individuals to co-chair this committee. The committee co-chairs shall subsequently designate members of the committee from their respective organizations. The ERC will assume the following:

- A. Foster an effective DA/NASA partnership in R&D efforts.
- B. Ensure that the DA and NASA's planning and resources are coordinated, when appropriate.
- C. Monitor progress toward the objectives as described in Section IV above and propose adjustments in the organizations' roadmaps, plans, and resources, as necessary.
- D. Propose changes to program goals and plans based on changing stakeholder and customer requirements.

The necessary executive actions required to implement ERC recommendations will be taken by individual members under the authority vested in them by their respective organizations. Actions of the ERC are intended to support, not supplant, existing strategic planning activities in each organization.

VI. POINTS OF CONTACT

Each Party will designate a senior single point of contact (POC) who will have responsibility and authority to coordinate and execute the provisions of this MOU. POCs will serve as liaisons and will have full authority to coordinate with their counterparts to ensure successful execution of this MOU.

VII. FUNDING

Each agency shall fund its own participation in this MOU in areas of agreed-upon collaborative efforts. All activities under or pursuant to this MOU are subject to the availability of appropriated funds and the Parties' respective funding procedures.

VIII. LIABILITY

Each Party agrees to assume liability for its own risks associated with activities undertaken in this MOU.

IX. AUTHORITY AND APPLICABLE LAW

- A. Nothing in this MOU alters the statutory authorities of the DA or NASA. This MOU is intended to facilitate cooperative efforts of the Parties in the area of aeronautics research.
- B. This MOU is entered into on behalf of NASA under authority of Sections 203 (c)(5) and (c)(6) of the National Aeronautics and Space Act of 1958, as amended, 42 U.S.C. 2473(c)(5) and (c)(6). This MOU is entered into on behalf of the DA under authority of 10 U.S.C. § 3014 and by General Order No. 3, paragraph 5h.

X. INTELLECTUAL PROPERTY

Unless otherwise agreed by the Parties, custody and administration of inventions made as a consequence of, or in direct relation to, the performance of activities under this MOU will remain with the respective inventing Party. Rights to inventions made by employees of a Party's contractor will be managed by that Party. In the event an invention is made jointly by employees of NASA (including employees of NASA contractors or subcontractors) and the DA (including employees of DA contractors or subcontractors), NASA and the DA will consult and agree as to future actions toward establishment of patent protection for the invention.

XI. USE AND RELEASE OF TECHNICAL DATA, PROTECTION, AND SECURITY OF INFORMATION

- A. It is the intent of the Parties that the information and data exchanged in furtherance of the activities under this MOU will be exchanged without use and disclosure restrictions. The Parties will not restrict each other's rights to use data unless required by national security regulations (e.g., classified information) or otherwise agreed to by the Parties for specifically identified information or data (e.g., proprietary data marked with a restrictive notice).

- B. The Parties agree that they will take appropriate measures to protect proprietary, privileged, classified, or otherwise confidential information that may come into their possession as a result of this MOU, provided that such information is marked with a restrictive notice so that it may be specifically identified.
- C. Release of information associated with joint activities carried out under this MOU will appropriately recognize each Party and will be coordinated between the Parties prior to the release.

XII. MODIFICATIONS

This MOU may be modified upon the mutual written consent of both Parties. Modifications must be signed by the original signatories to the MOU, or their designees or successors. No oral statement by any person shall be interpreted as modifying or otherwise affecting the terms of this MOU.

XIII. TERMINATION

Either Party may terminate this MOU at any time, with or without cause, and without incurring any liability or obligation to the terminated Party by giving the other Party at least 60 days prior written notice of termination.

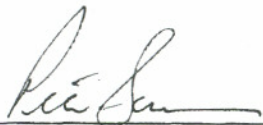
XIV. PERIOD OF PERFORMANCE

This MOU becomes effective upon the date of the last signature below and shall remain in effect unless terminated by written request of either Party.

XV. EXECUTION

In consideration of the foregoing, the undersigned hereby execute this MOU.

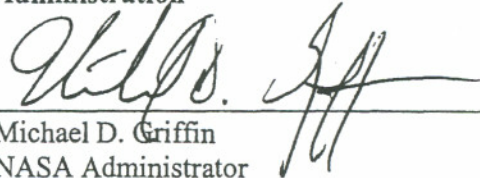
For the Department of the Army



Pete Geren
Secretary of the Army

DATE: Aug 27, 2007

For the National Aeronautics and Space Administration



Michael D. Griffin
NASA Administrator

DATE: July 19, 2007