



**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL AVIATION ADMINISTRATION**  
National Policy

**ORDER**  
**9550.6B**

Effective Date:  
05/30/14

**SUBJ:** Technology Transfer Program

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- 1. Purpose of This Order.** This order prescribes policy and procedures governing the transfer of technology and the responsibilities associated with this program.
- 2. Audience.** This order affects groups in Washington Headquarters, regions, and centers.
- 3. Where You Can Find This Order.** You can find this order on the FAA.GOV website under the "Regulations & Policies" tab and select "Orders & Notices" or you can also find this order on the MyFAA Employee website. Use "Tools & Resources" tab and select "Orders & Notices."
- 4. Cancellation.** Order 9550.6A, Technology Transfer Program, dated May 18, 1995.
- 5. Explanation of Changes.** This revision:
  - a.** Establishes and assigns the responsibility to manage and direct the Technology Transfer Program to the Office of Research and Technology Applications (ORTA) located at the William J. Hughes Technical Center (WJHTC). The Technology Transfer Program Manager performs the responsibilities necessary to administer the program.
  - b.** Updates the responsibilities and procedures to administer the Technology Transfer Awards Program.
  - c.** Establishes the Invention Evaluation Committee (IEC).
  - d.** Updates the distribution of royalties and other payments.
  - e.** Updates other administrative changes.
  - f.** Updates Appendix A - Abbreviations and Definitions.
- 6. Background.** The Stevenson-Wydler Technology Innovation Act (Act) of 1980, and the Federal Technology Transfer Act of 1986, now codified at Section 3700, *et seq.* of Title 15 of the United States Code, and related legislation and Executive Orders, required Federal laboratories to establish a program for Technology Transfer. Each Federal laboratory must establish an ORTA, or combine the ORTA with an existing organization, to administer the Technology Transfer program. The Act requires Federal agencies to make separate determinations of the mission of each of its laboratories. The Department of Transportation (DOT) *Research, Development, and Technology Plan*, 6<sup>th</sup> Edition, Fiscal Year 2005, identifies the WJHTC as the Federal Aviation Administration's (FAA's) test bed laboratories, and aerospace medicine research, carried out by the Civil Aerospace Medical Institute (CAMI), to support the overall mission of the FAA to provide safe and efficient aviation and commercial space transportation systems. Executive Order 12591, Facilitating Access to Science and Technology, dated April 10, 1987, was issued to ensure that Federal agencies and laboratories assist

state and local governments, academia, and the private sector, particularly small business, in transferring technology pursuant to the legislation.

**7. Scope.** The agency with a designated Federal Laboratory can enjoy the many benefits of Technology Transfer legislation. Researchers can collaborate with partners from state and local governments, academia, and the private sector and conduct research that would not have been done without leveraging each other's ideas and resources. If any additional expenses are associated with conducting cooperative research, the laboratory may accept funds from the collaborating party to compensate for those costs and use funds received from a collaborating party to hire personnel to carry out the agreement who will not be subject to full-time equivalent restrictions of the agency. Laboratory personnel may participate in personnel exchanges with academia and private industry. The agency may commercialize inventions developed by agency personnel with a portion of the royalty payments going to the inventor.

**a.** A Laboratory Director is responsible for managing and protecting their national asset as well as ensuring the full use of the results of the Nation's federal investment in research and development (R&D), in accordance with 15 U.S.C. 3710, Utilization of Federal Technology, and 15 U.S.C. 3710a, Cooperative research and development agreements.

**b.** The FAA is a member of the Federal Laboratory Consortium (FLC) for Technology Transfer. The FLC is the nationwide network of federal laboratories that provides the forum to develop strategies and opportunities for linking laboratory mission technologies and expertise with the marketplace.

**8. Policy.** It is FAA policy to:

**a.** Design the Technology Transfer Program to achieve the maximum national benefit from FAA scientific and technical efforts.

**b.** Encourage dissemination of scientific and technical information, data, and expertise developed by or for FAA to state and local governments, academia, and the private sector consistent with United States national policy.

**c.** Promote sharing of technology that helps advance science or that has commercial potential and thus should be employed to the best advantage for the security and socio-economic well-being of the United States.

**d.** Support coordination and collaborative research with industrial, academic, and other government entities by sharing research efforts and facilities as appropriate.

**e.** Support and promote establishment of Cooperative Research Centers in accordance with 15 U.S.C. 3705.

**9. Delegation of Authority.** Under the Technology Transfer Act, the Secretary of Transportation may permit the director of any of its Federal laboratories to enter into Cooperative Research and Development Agreements (CRDAs) (15 U.S.C. 3710a). The Secretary has authorized each Administrator of an Operating Administration to permit their laboratories to enter into such CRDAs (49 CFR 1.45 (a) (14)). In addition this Order delegates to the Laboratory Director, WJHTC, the following authority:

- a. The Laboratory Director, WJHTC, is authorized to enter into CRDAs.
- b. The Laboratory Director, WJHTC, is authorized to receive and disburse royalties and other payments.
- c. The Laboratory Director, WJHTC, shall designate a Technology Transfer Program Manager who will also serve as the manager of the ORTA pursuant to 15 U.S.C. 3710 (b).
- d. The Laboratory Director, WJHTC, may designate the laboratory and alternative laboratory representative to the FLC.
- e. The Laboratory Director, WJHTC, is authorized to conduct an awards program.

**10. Responsibilities.**

**a. The Laboratory Director, WJHTC:**

(1) Supports Technology Transfer objectives as an integral part of the R&D effort and incorporates Technology Transfer objectives into the mission of each appropriate R&D activity.

(2) Makes available to the ORTA for use within FAA sufficient funds each fiscal year to support the Technology Transfer functions of the office as specified in 15 U.S.C. 3710 and may use these funds for cash awards in accordance with DOT Order 2100.3A – Employee Inventions.

(3) Signs CRDAs.

(4) Supports using FAA laboratories, facilities, services, and intellectual property for CRDAs if available.

(5) Encourages Technology Transfer in the workplace by including it in job descriptions, in promotion policies, in monetary awards, and in performance evaluations for appropriate scientific and engineering personnel.

(6) Licenses, assigns, or waives rights to intellectual property developed by FAA through Technology Transfer mechanisms. Legal counsel must review and approve all such licenses, assignments, and waivers prior to execution.

**b. The ORTA Manager, currently the Technical Strategies and Integration Manager, WJHTC:**

(1) Supports cooperative efforts to stimulate industrial innovation, especially in small businesses.

(2) Supports and encourages the exchange of scientific and technical personnel among academia, industry, and government.

(3) Ensures the establishment of one full-time equivalent position, at a minimum, to manage the Technology Transfer Program for the agency.

(4) Provides for Technology Transfer staff to participate in appropriate development programs.

(5) Chairs the Technology Transfer Awards Committee. This authority may be re-delegated.

**c. The Technology Transfer Program Manager or ORTA:**

(1) Develops agency policies and procedures for Technology Transfer.

(2) Coordinates agency activity under the Technology Transfer Program.

(3) Develops a Technology Transfer budget and program plan, and submits budget requests to the FAA's Research, Engineering & Development Executive Board (REB).

(4) Acts as FAA focal point for Technology Transfer activities including all CRDAs.

(5) Develops and coordinates activities, and maintains permanent records of all CRDAs.

(6) Provides the Office of Center Counsel the opportunity to review Laboratory activities to ensure that CRDAs, patent licenses, software licenses, technology licenses, and employee activities under CRDAs are legally sufficient and consistent with Government policy.

(7) Provides the Office of Center Counsel the opportunity to review potential conflicts of interest arising out of the official duties of Federal employees and their contemplated activities under any CRDA or other arrangement.

(8) Prepares an application assessment of selected FAA R&D projects that have potential for successful application in academia, state and local governments, and private industry.

(9) Provides and disseminates information on federally owned or originated products, processes, or services having potential applications within FAA.

(10) Cooperates within and assists the National Technical Information Service, the FLC, and other organizations that link the R&D resources of the laboratory and the Federal Government as a whole to potential users in academia, state and local governments, and private industry.

(11) Participates in FLC functions.

(12) Participates, where feasible, in regional, state, and local programs designed to facilitate Technology Transfer for the benefit of said jurisdictions.

(13) Participates in appropriate activities of the public and private sector that provide the opportunities to achieve Technology Transfer objectives (e.g., local government meetings or small business conferences).

(14) Works with program managers and technical department heads in identifying technologies suitable for transfer.

(15) Ensures that no Technology Transfer functions substantially compete with similar services available in the private sector.

(16) Ensures that no Technology Transfer functions conflict with export control regulations, policies governing militarily critical technology, or any of the responsibilities and procedures for Technology Transfer control set forth by those agencies having responsibility for export controls.

(17) Encourages and cooperates with establishing technical volunteer programs as a resource to complement and support Technology Transfer activities.

(18) Coordinates Technology Transfer efforts with Small and Disadvantaged Business Utilization Specialists to stimulate commercialization of appropriate technologies by small business.

(19) Participates as a voting member, along with the appropriate organizations from other Federal laboratories, in the FLC.

(20) Provides technical assistance to state and local government officials.

(21) Establishes, administers, and chairs the IEC.

(22) Monitors, administers, promotes, and provides advice on the agency's Technology Transfer program and activities.

(23) Monitors the reception, and recommends the disbursement and distribution of royalties and other payments associated with the licensing of intellectual property and the reasonable costs assessed against those cooperating parties under CRDAs.

(24) As specified in the Technology Transfer Act, prepares an annual report for Congress on Technology Transfer as part of the annual budget submission. The report will include summaries of the amount of royalties, other income received, and expenditures made, including inventor awards.

(25) Notifies FAA Office of Security & Hazardous Materials (ASH) upon detection or suspicion of:

(a) Actual or attempted acquisition of FAA technology by an unauthorized person or entity;

(b) Actual or attempted acquisition of dual-use FAA technology as so deemed by the Department of Commerce Bureau of Industry and Security by a foreign power or agent;

(c) Any actual or attempted acquisition of FAA technology by any person for unauthorized person benefit or conveyance to others for unlawful economic or advantage;

(d) Actual or attempted acquisition of FAA sensitive or controlled technology or information as deemed by FAA orders or U.S. government policies by an unauthorized person;

(e) Actual or attempted acquisition of FAA sensitive or controlled technology or information which is protected by intellectual property protections by unauthorized person or organization;

(f) Actual or attempted acquisition of FAA technology or information by a designated country or their agent listed by the Office of Foreign Assets Control as a prohibited recipient or by other U.S. State Department restrictions; or

(g) As deemed necessary by the Technology Transfer Program.

**11. Principles.** The principles of FAA's Technology Transfer Program include the following:

**a.** Enter into CRDAs. Within CRDAs, and subject to national security policies, FAA may:

(1) Be party to an agreement that includes other Federal agencies; units of state and local government; industrial organizations (including corporations, partnerships, limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons (including licensees of inventions owned by the Federal agency). These agreements, to the maximum extent possible, should give special consideration to small business firms and consortia involving small business firms. They should also give preference to businesses in the United States that agree that products embodying inventions made under a CRDA or produced by using those inventions will be manufactured substantially in the United States. In the case of any industrial organization or other person subject to the control of a foreign company or government, FAA will consider whether that foreign government permits U.S. agencies, organizations, or other persons to enter into CRDAs and licensing agreements.

(2) Provide personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement. Collaborating parties may provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts that are consistent with the mission of FAA. May use funds received from collaborating parties to defray FAA costs for the collaborative effort as well as to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency.

(3) Grant or agree to grant in advance to a collaborating party, patent licenses or assignments, or options in any invention made in whole or in part by a Federal employee under the agreement, for reasonable compensation when appropriate. In these cases, the FAA retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government and any other rights FAA considers appropriate.

(4) Waive, subject to the reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of the collaborating party.

(5) Consistent with established FAA requirements and standards of conduct, permit employees or former employees to participate in efforts to commercialize inventions made while in U.S. Government service, subject to national security considerations.

**b. Make every effort where practicable to commercialize patentable results of federally funded research.**

(1) FAA will promote commercialization by granting to all collaborating parties under CRDAs the title to patents made in whole or part with Federal funds, in exchange for royalty free use by or on behalf of the government.

(2) FAA will implement as expeditiously as practicable, royalty and other payments sharing programs with inventors who were employees at the time they made their inventions.

(3) If the agency has the right of ownership under Title 15, U.S.C. 3710d, Employee Activities, and does not intend to file a patent application or otherwise promote commercialization of the invention, the agency will allow the inventor to retain title to the invention. The agency will do this only if the inventor is a Government employee or former employee who made the invention while employed by the Government. Also, this right is subject to reservation by the Government of a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In addition, the agency may condition the inventor's right to title on the timely filing of a patent application when the Government determines that it has or may have a need to practice the invention.

**c. Distribute royalties received by FAA.**

(1) Income received from royalties or other payments received from licensing and assigning inventions under agreements entered into by the laboratory will be payable to and equally divided among the inventor or co-inventors, if any. These payments will continue as long as the agency receives economic benefit, regardless of the inventor's future employment. The Inventors and each co-inventor will share each year the first \$2,000, and after that at least 15 percent, of the royalties or other payments received from the license or assignment. Royalties will be paid in accordance with DOT Order 2100.3A – Employee Inventions.

(2) Payments from royalties to an Inventor will not exceed \$150,000 per year without Presidential approval as provided in Title 5 U.S.C. Section 4504, Presidential Awards.

(3) The royalties will be in addition to the employee's regular pay. Payments to an employee will be reported annually as income with appropriate income tax withheld on Internal Revenue Form 1099.

(4) Inventors and co-inventors must keep the agency informed of their current address and financial institution for payment of royalty checks. If the employee changes an address or financial institution, the employee should notify the FAA's ORTA.

(5) Royalties or other payments may be used or obligated during the fiscal year in which they are received or during the two succeeding fiscal years. After assigning royalties to inventors under paragraph 11.c.(1), income may be used for:

- (a) Paying expenses incidental to administration and licensing of inventions.
- (b) Rewarding scientific, engineering, and technical employees at that activity.
- (c) Promoting scientific exchange.
- (d) Educating and training employees consistent with the R&D mission and objectives of FAA.
- (e) Scientific R&D consistent with the mission and objectives of the laboratory and the FAA.

**12. FAA Employee Inventions.** Under DOT Order 2100.3A – Employee Inventions, each FAA employee who makes an invention or innovation must fully disclose the invention to the DOT Patent Counsel, or his/her designee. Employees shall complete DOT Form F2000.1 – Disclosure of Invention, DOT Form F2000.2 – Record of Invention, and DOT Form F2000.3 – Invention Rights (<http://dotnet.dot.gov/forms/>). Further information may be obtained from the Center Counsel, WJHTC. Further actions related to inventions made by FAA employees shall be at the discretion of the DOT Patent Counsel, or his/her designee.

**13. Invention Evaluation Committee (IEC).** The objectives of the IEC are to identify innovative marketable aviation-related technologies, prioritize technologies that appear worthy of transfer, find commercial applications for those technologies, and make other recommendations regarding intellectual property. The goal of the IEC is to decide whether to invest the time and resources to evaluate the transferability of a technology.

**a.** The IEC is comprised of management, legal, Technology Transfer, and technical personnel. The following are members of the IEC:

- (1) Technology Transfer Program Manager
- (2) FAA Center Counsel
- (3) Representative from Program Office from which the invention originated
- (4) Any others designated by the ORTA on a case-by-case basis that have specialized experience in the area of the invention

**b.** The composition of the IEC may be adjusted at the discretion of the Technology Transfer Program Manager. Once the IEC receives an invention disclosure, the IEC will convene within ten (10) days to begin evaluating and assessing the documents.



c. The IEC shall:

- (1) Solicit invention disclosures on inventions made by agency employees,
- (2) Forward expeditiously to the DOT Patent Counsel those invention disclosures submitted by its agency employees,
- (3) Review the invention disclosures submitted by agency employees,
- (4) Evaluate the technical merits of employee inventions,
- (5) Recommend to the DOT Patent Counsel those inventions it believes should receive patent protection, and,
- (6) Assist the DOT Patent Counsel in determining the respective rights of the DOT/FAA and the inventor(s) in inventions made by agency employees.

**14. Technology Transfer Awards Program.** The ORTA presents Technology Transfer Awards every two years to individuals throughout the agency who have made major contributions to Technology Transfer. These awards do not replace any monetary gain by current or former employees from royalties, licenses, or any other agreements. If the awards committee finds that no nominee meets the criteria in any category, it need not present an award in that category. It is FAA policy to:

- a. Recognize Federal employees who contribute to the Technology Transfer Program with appropriate monetary and professional excellence awards.
- b. Fund this awards program from within the annual budget appropriation for the Technology Transfer Program. After distributing royalties to inventors, royalty income received by FAA may be used to supplement available funding.
- c. Present awards as an incentive for FAA personnel to participate in Technology Transfer. Awards will be presented to the employees who are directly involved with the Technology Transfer activities being recognized.
- d. Select award recipients by a committee composed of the individuals identified in Paragraph 16 – Technology Transfer Awards Committee.
- e. Present awards every two years, when applicable, in one or more categories.
- f. Submit award nominations, as appropriate, from the Technology Transfer Awards Committee to the FLC to consider in its award process.

**15. Award Categories.** The following award categories are applicable for FAA personnel participating in and actively promoting Technology Transfer. The Technology Transfer Awards Committee will determine appropriate rating and evaluation procedures for selection of award recipients. If there is a team award, the award amount will be divided equally among the team members.

**a. Intellectual Property.** To the individual(s) whose activities and efforts have significantly increased the technology base of FAA, whether through patents, software, or other exploitable technology (award amount: not to exceed (NTE) \$5,000).

**b. Innovative Efforts.** To the individual(s) whose innovative efforts had the most significant positive impact on transferring technology (award amount: NTE \$5,000).

**c. Cooperative Research and Development Agreements.** To the individual(s) whose contributions in arranging CRDAs created a positive environment for Technology Transfer (award amount: NTE \$5,000).

**d. Management.** To the manager(s) whose direct efforts promoting the transfer of technology had the greatest positive effect on the Technology Transfer Program (award amount: NTE \$3,000).

**e. Technology Transfer Assistance.** To the individual(s) whose direct assistance had the most positive effect on Technology Transfer; for example, aided development of patents, CRDAs and licensing agreements (award amount: NTE \$3,000).

**f. Awards Committee Award.** To any individual(s) whose activities in the area of Technology Transfer are worthy of recognition (award amount: NTE \$1,000).

#### **16. Technology Transfer Awards Committee.**

**a. Membership** includes the Technical Strategies and Integration Manager, the Technology Transfer Program Manager, one representative from the Office of Center Counsel at the WJHTC, Federal Laboratory representatives as appropriate; and optional ad-hoc members appointed at the ORTA's discretion.

**b. Representation** on the awards committee should reflect a cross section of personnel with technical knowledge and background.

**c. The ORTA:**

(1) Administers the Technology Transfer Awards Program for the FAA.

(2) Coordinates the awards presentation ceremony.

(3) Provides funding for the Technology Transfer Awards Program through the Technology Transfer Program.

(4) Appoints an executive secretary to document the proceedings of the Technology Transfer Awards Committee.

(5) Evaluates the effectiveness of the Technology Transfer Awards Program and recommends improvements as required.

(6) Maintains records of awards and award nominations.

(7) Forwards award presentation documents to appropriate approval levels, through the Laboratory Director, WJHTC.

(8) Submits nominations, as appropriate, to the FLC to consider in its awards process.

d. The Public Affairs Staff, WJHTC, publicizes the Technology Transfer Awards Program FAA-wide, including the call for nominations, the names of award nominees, and the names of award recipients.

## **17. Nominations.**

a. The ORTA will publicize the call for nominations. It will begin November 15 and close January 15.

b. Forward nominations to the ORTA by January 15.

c. Make award nominations using FAA Form 9550-9, FAA Technology Transfer Award Nomination Form. Use this form when submitting a nomination for any category of award listed in Paragraph 15 – Award Categories. FAA Form 9550-9 is on the forms website [https://employees.faa.gov/tools\\_resources/forms/](https://employees.faa.gov/tools_resources/forms/)

## **18. Procedures.**

a. Any employee nominated for an award may be nominated for just one category of the six listed.

b. Individuals other than supervisors may make nominations; however, second level supervisors must concur on the nomination form.

c. The Technology Transfer Awards Committee will determine appropriate rating and evaluation procedures for selecting award recipients. These procedures will be formalized, published, and used as the committee standards for rating and evaluating future nominations.

d. The Technology Transfer Awards Committee will have two days to meet, evaluate nominations, and select award recipients by the last working day of February.

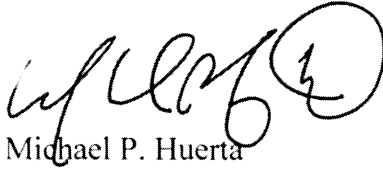
e. The ORTA shall forward to the Laboratory Director, WJHTC, the names of the awardees and the rationale supporting each by March 15.

**19. Presentation of Awards.** Awards will be presented at a time and place selected by the Technology Transfer Awards Committee and approved by the Laboratory Director, WJHTC, or his/her designee.

a. The Technology Transfer Program Manager will coordinate the awards presentation and ceremony.

b. Appropriate agency plaques accompany cash awards.

**20. Distribution.** The design of this document is to provide key information to multiple parties. It is available for general access by Federal Aviation Administration (FAA) staff and the public via electronic media at previously identified website location and via hardcopies upon requests submitted to the ORTA.

A handwritten signature in black ink, appearing to read 'Michael P. Huerta', with a large circular flourish at the end.

Michael P. Huerta  
Administrator

## **Appendix A. Abbreviations and Definitions**

1. For purposes of this Order, Agency means the Federal Aviation Administration, or FAA.
2. Cooperative Research and Development Agreement, or CRDA, means the written agreement (not a procurement or grant) used for innovative collaboration and cooperation to achieve the goals of Technology Transfer. The formal definition may be found at 15 U.S.C. 3710a (d) (1).
3. Employee means any officer or employee, civilian or military, of the FAA, including any part-time employee.
4. Federal agency means the Department of Transportation, or DOT.
5. Federal Laboratory Consortium for Technology Transfer, or FLC, means the nationwide network of Federal laboratories that provides the forum to develop strategies and opportunities for linking laboratory mission technologies and expertise with the marketplace. See 15 U.S.C. 3710 (e).
6. Intellectual Property means any product of the human intellect – such as an invention, discovery, technology, creation, development, or other form of expression of an idea – whether or not the subject matter is protectable under the laws governing the different forms of intellectual property.
7. Invention means any process, machine, manufacture, composition of matter, or any new and useful improvement thereof, which is or may be patentable under the patent laws of the United States.
8. Invention Evaluation Committee, or IEC, means the committee of employees established to determine if an invention may be relevant to FAA, DOT, or Government programs; evaluate the transferability of a technology; and recommend appropriate actions related to intellectual property.
9. Inventor/co-inventor means a person(s) who makes an invention or discovery, whether or not patentable.
10. Laboratory means the group of research, development, and engineering facilities owned or otherwise used by the FAA. The formal definition of “laboratory” may be found at 15 U.S.C. 3710a (d) (2).
11. Office of Research and Technology Applications, or ORTA, means the office designated at 15 U.S.C. 3710 (b). The Technology Transfer Program Manager serves as the ORTA for the WJHTC.
12. The Federal Aviation Administration William J. Hughes Technical Center, or WJHTC, is the FAA’s aviation research, development, test and evaluation facility.