

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1370.85

2/26/02

SUBJ: SOFTWARE RELEASE

- 1. PURPOSE.** This order establishes the requirements to be met by a Federal Aviation Administration (FAA) organization that intends to release software into the custody or control of entities other than those in the United States (U.S.) federal government. This order specifies the process to be executed, the controls to be implemented, and the approvals to be obtained to release the software.
- 2. DISTRIBUTION.** This order is distributed to the division level in Washington headquarters, regions, and centers.
- 3. BACKGROUND.** It is in the best interest of aviation safety that the rigorous quality and advanced performance of FAA systems be adopted throughout the world. Therefore, the FAA intends to facilitate the sharing of software technologies and products with its domestic and international partners where possible and safe. There are programmatic, economic, legal, and security issues to be considered when releasing software to entities outside the U.S. federal government. By providing structure to the software release process, the FAA intends to remove, where possible, subjective elements and considerations and assign responsibilities to the appropriate organizations.
- 4. SCOPE.** This order:

 - a.** Applies to the release of software to both foreign and domestic organizations that are not part of the U.S. federal government. Configuration data, such as adaptation sets and other customizations, are within the scope of this order.
 - b.** Does not apply to hardware release. It is the FAA's preference that the requester obtain commercial hardware and documentation directly from the vendor when practicable.
 - c.** Does not apply to national airspace system (NAS) operational data release. The release of NAS operational data is covered by Order 1200.22, Use of National Airspace System (NAS) Computer and Radar Data or Equipment By Outside Interests.
 - d.** Supersedes Order 1200.22 with respect to the release of NAS software programs.
 - e.** Does not apply to software being used for demonstration purposes as long as the software remains in the custody or control of the FAA and is removed after the demonstration.
 - f.** Does not apply to release of publicly available software or software that may be obtained through the Freedom of Information Act (5 U.S.C. 552) process or through public FAA Internet access.
- 5. AUTHORITY.** The Administrator reserves the authority to approve changes that establish or revise policy, delegate authority, or assign responsibility. The Assistant Administrator for Information Services and Chief Information Officer (AIO-1) may issue changes to this order as necessary.
- 6. DEFINITIONS.**

 - a. Clearinghouse:** An FAA organization that organizes the review of the proposed release, conducts required coordination activities, and prepares the transfer agreement.

b. Full Cost: Full cost includes all direct and indirect costs to any part of the federal government for providing goods, a resource, or a service. These costs include, but are not limited to, an appropriate share of direct and indirect personnel costs, physical overhead, consulting, other indirect costs, management and supervisory costs, and the costs of enforcement, collection, research, and establishment of standards. Paragraph 6.d.(1) of Office of Management and Budget Circular No. A-25 Revised, User Charges, provides a more complete definition.

c. NAS Operational Data or Equipment: Primary and secondary radar systems and/or data received or produced by automated computer systems used for air traffic control purposes. This includes data used or produced by software programs used in terminal, en route, flight service station, traffic management, and communications facilities for flight data processing and distribution.

d. U.S. Federal Government Entity: An individual or organization within the U.S. federal government. Excludes local and state governments, private organizations, and international private or public organizations.

e. Publicly Available Software: Software that is freely available; e.g., in libraries, at trade shows, from the Internet, or that is available at nominal reproduction cost.

f. Release: Placing an item into the custody or control of an entity other than the U.S. federal government.

g. Requester: Entity requesting software.

h. Software: Collection of computer programs, procedures, rules, and associated documentation and data that are used to operate a computer and related devices. See Institute of Electrical and Electronics Engineers (IEEE) Software Engineering Standards, IEEE Press, 1987.

i. Sponsor: An FAA organization responsible for the acquisition, deployment, distribution, or in-service engineering of the software being requested. The determination of the sponsor depends on the life-cycle phase of the system (e.g., Integrated Product Team, Business Service Unit, and In-Service Engineering).

j. Transfer Agreement: The document by which the FAA and the requester agree to the terms and conditions of a software release. International agreements use a Memorandum of Agreement (MOA), Memorandum of Cooperation, or a form of contract. Domestic agreements use a MOA or a contract.

7. POLICY. All requests for software release will be reviewed by an appropriate clearinghouse and approved by AIO-1. The review will address impact, ownership, security, and cost issues.

8. POLICY IMPLEMENTATION.

a. Approval Process Overview

(1) Request Submission. Upon receiving a request for software release the sponsor shall notify the associate or assistant administrator of the line of business (LOB) or staff office (SO) to which it belongs. The associate or assistant administrator will review the request and either deny it or notify the clearinghouse within 30 days of when the request was received. Requesters shall be given a copy of this order and they may inquire directly with the clearinghouse regarding the status of their request. The sponsor will decide the form of the request and the information associated with it on a case-by-case basis.

(2) Clearinghouse Review. The Office of the Assistant Administrator for Information Services and Chief Information Officer (AIO) shall be the clearinghouse for domestic requests for software. The Office of International Aviation (AIA) shall be the clearinghouse for international requests for software.

(a) After being notified, the clearinghouse coordinates with the appropriate offices to perform a series of staff-level reviews described in detail in the following sections. The required staff-level reviews are:

1. Impact assessment.
2. Ownership review.

3. Security review.

4. Cost review.

(b) For international transfers, at the completion of the staff-level reviews the clearinghouse shall complete an FAA questionnaire for software release and submit it to AIO-1 with the supporting documentation produced by the staff reviews. AIO shall provide the format for the questionnaire and the supporting documentation. The staff review process and the documentation of its results must be completed within 120 days of the date the request has been received by the clearinghouse.

(c) The clearinghouse will conduct any coordination activities it deems appropriate or required at this point. In particular, in the case of an international transfer, it will review the request with the Department of Commerce (DOC).

(d) The clearinghouse will also create a transfer agreement and submit it for legal review prior to submitting the staff review documentation to AIO. General considerations and specifics of the transfer agreement are presented in the following sections.

(e) If any of the staff reviews identify reasons that prevent the requested release of software, the clearinghouse interrupts the other staff reviews. The clearinghouse will present the conclusions to the LOB/SO responsible for the software with the supporting documentation produced, so far, by the staff reviews. The LOB/SO will review the clearinghouse conclusions and communicate the results to the sponsor and the requester.

(3) **AIO Review.** AIO will organize the review of the documentation submitted by the international clearinghouse or of the results of the staff reviews it has coordinated.

(a) The possible results of this review are:

1. Request for supplemental information - AIO requests supplemental information or additional commitments from the clearinghouse or the sponsor;

2. Rejection - AIO does not recommend the execution of the transfer under the conditions specified in the submitted documentation; or

3. Approval - AIO recommends the execution of the transfer under the conditions specified in the submitted documentation.

(b) The results of the AIO review will be communicated to the international clearinghouse and the LOB/SO responsible for the software.

(4) **Department of State (DOS) Review.** If the requested transfer is international and AIO has approved the release, the clearinghouse will transmit the transfer agreement and any other necessary documentation to the DOS for approval. If the release is approved, the clearinghouse transmits the transfer agreement to the associate or assistant administrator of the LOB/SO responsible for the software for execution.

(5) **Execution of the Transfer.** After the approval of AIO and, if the transfer is international, of the DOS, the results of the review and the transfer agreement are presented to the associate or assistant administrator of the LOB/SO responsible for the software. The associate or assistant administrator will execute the transfer per the transfer agreement. If the request is denied, the sponsor shall notify the requester and present a brief explanation of the reason(s) for denial.

b. Staff Reviews. This section describes content and scope of the staff-level reviews organized by the clearinghouse prior to presenting the FAA questionnaire for software release to AIO. The reviews provide the supporting documentation that is presented to AIO with the completed questionnaire.

(1) **Impact Assessment.** Once a request for software is received, the clearinghouse will determine, with the sponsor, whether the request should be granted.

(a) A review will be conducted to address impact to the team, development schedules, resources, etc.

(b) The review will begin with a firm understanding of the request; e.g., request for source or object code, interest in periodic updates, maintenance support, adaptation support, documentation, whether and how any requirements or requests for functionality changes will be addressed. Based on agreed requirements, the requester and sponsor will determine the products and services required to make the transfer successful. This effort will address required documentation, services, configuration available, and termination date.

(c) Once the details of the request are understood, the clearinghouse will evaluate with the sponsor the resources required to support the request. If the resources are not readily available on the team, the sponsor will determine whether additional resources are available from another source (e.g., contractor, other FAA organization). This review must include an assessment of whether the additional work will cause an impact to the existing schedules. The sponsor will consider alternatives to counteract the negative impacts.

(d) The clearinghouse will determine whether the transaction will be beneficial to the FAA and aviation safety. The clearinghouse will also evaluate the opportunity for financial benefits, functionality ideas, and independent assessment of product capability.

(e) The results of this review will include a determination of the limitation of the FAA's involvement (maintenance, upgrades, information, configuration management, on-site support).

(2) Ownership Review. The FAA's rights must be determined based upon the exclusivity of government funding, any negotiated clauses, and the extent of restrictive markings.

(a) The review must determine whether a valid copyright restriction in a source code header or documentation may limit the FAA's ability to release software to the public, even though the FAA would otherwise appear to have a license for "unlimited rights" (see Acquisition Management System toolbox, section T3.5).

(b) The clearinghouse will review any existing clauses and provisions indicating the extent of government ownership rights. Where necessary, the clearinghouse may have to negotiate additional rights to accomplish an intended release.

(c) The clearinghouse will cooperate with the Office of the Chief Counsel (AGC) to determine ownership status with the assistance of the Office of Acquisitions and the sponsor.

(3) Security Review. The transfer of FAA software to another organization external to the U.S. federal government can represent a security risk for the system of which the software is part and for the systems that interface with it. Because so much of the software is off-the-shelf and non-classified, software security should not be based on the fact that the software is secret or unknown to a threat agent. This must be verified during the analysis that is part of the certification and authorization process for the system and documented in the System Certification and Authorization Package (SCAP). If the SCAP does not contain this analysis or the system does not have a SCAP yet, the clearinghouse is responsible for analyzing, in cooperation with the sponsor, the risk due to the transfer. The results of this analysis must be incorporated into the SCAP.

(a) The risk analysis must concentrate on the following elements:

1. Exposure to threat agents, both inside and outside the organization that receives the software through the transfer.

2. Potential to develop threat actions.

3. Opportunity to exploit existing vulnerabilities in the software.

(b) If the software is part of an operational, mission critical system, this system must have been certified and authorized for operation prior to the authorization for the transfer.

(c) The sponsor organization for the transfer is responsible for addressing and, if necessary, mitigating any risks identified during the risk analysis. If the risk mitigation requires additional or stronger countermeasures, the sponsor organization must document the estimated additional cost and impact to implement and, if necessary, operate the countermeasures. Any residual risk after the implementation of the new countermeasures must be documented.

(d) The structure and format of the security review documentation will be specified in the FAA Information Systems Security Program Handbook.

(4) Cost review.

(a) Cost recovery goals of FAA's software release policy are:

1. Ensure that each release of software be financially self-sustaining, and
2. Promote efficient allocation of the FAA's resources by recovering costs from the recipient that are at least as great as the full cost to the government of providing the release of software.

(b) It is understood that there will be those cases where the cause of international safety will be improved by providing software to air traffic control agencies outside of the U.S. at less than full cost, or even at no cost. Full cost recovery at or near market price is a goal, not a requirement. Inability to pay, in and of itself, will not preclude the FAA from releasing software to entities outside the U.S. federal government.

(c) The clearinghouse will estimate the full cost of releasing the software in cooperation with the associate or assistant administrator of the LOB/SO responsible for the software. This estimate will be used as a basis for negotiation in developing the transfer agreement. The FAA goal in negotiations is a minimum of full cost recovery. Once a cost is agreed upon between the parties, and before the documentation of the request is presented to the clearinghouse, a schedule of advance payments may be mutually developed. The intent of this schedule of advance payments is for the party to whom the software will be released to have funds available in an account against which the FAA can bill its expenses as those expenses occur.

(d) Each party to whom software will be released will incur a unique set of costs resulting from a generic set of cost elements. The generic set of cost elements will be developed on a case-by-case basis to determine the cost to be recovered.

(e) The payments will be made to the LOB/SO responsible for the software according to mechanisms that will be established on a case-by-case basis by the associate or assistant administrator of the LOB/SO and agreed upon by the clearinghouse and AGC.

c. Export Control. The FAA will comply with all export laws and regulations. Export of items may be subject to restrictions imposed by DOS, Office of Defense Trade Controls, DOC, Bureau of Export Administration, or other agencies. Export restrictions may apply to items, documentation, or the mere disclosure to a foreign individual. The clearinghouse will submit each contemplated transaction to AGC for review and approval. Export control issues will be resolved across the entire process. Some aspects require information and some aspects depend on the particular transaction details. Due to the potential lags of coordinating with other agencies, all export control reviews must be completed before executive authorization.

d. Transfer Agreement. The transfer agreement may take whatever form the clearinghouse deems appropriate.

(1) The agreement shall address the following subjects:

- (a) Authority.
- (b) Scope - Item with configuration.

- (c) Description of items being obtained by requester from other sources.
- (d) Reimbursement amount.
- (e) Installation requirements.
- (f) Documentation.
- (g) On-going support.
- (h) Availability of updates from the FAA.
- (i) Terms of use (e.g., license, right to modify, reverse engineer, combine with other products).
- (j) Authority to resell software or its output.
- (k) Authority to use the FAA name, logo, or images.
- (l) Export controls/no authority to transfer or re-export.
- (m) Liability.
- (n) Modification.
- (o) Schedule.

(2) The agreement will specify that requesters stay current with the FAA versions or they may lose support from both the FAA and the original equipment manufacturer. The FAA will disclaim availability of service and support for old or non-FAA configurations. The FAA will also disclaim liability for viruses, software use and misuse, and require hold-harmless provisions.

9. ROLES AND RESPONSIBILITIES.

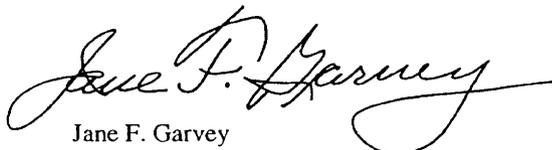
a. **Sponsor.** The sponsor organization:

- (1) Receives the request for software release.
- (2) Transmits the request to the associate or assistant administrator of the LOB/SO to whom the request belongs.
- (3) Supports the staff-level reviews as requested by the clearinghouse.
- (4) Provides supplemental information to the clearinghouse upon request.
- (5) Keeps the requester informed of status and outcome of the process.
- (6) Supports the execution of the transfer agreement.

b. **Associate or Assistant Administrator of FAA LOB/SO.** The associate or assistant administrator of the FAA LOB/SO responsible for the requested software and for the sponsor organization:

- (1) Reviews the information received from the sponsor.
- (2) Rejects the request or transmits it to the clearinghouse.

- (3) Supports the staff-level reviews as requested by the clearinghouse.
- (4) Implements AIO decisions and executes the transfer.
- c. **Clearinghouse.** The clearinghouse:
 - (1) Reviews the documentation presented by the sponsor.
 - (2) Organizes the staff level reviews.
 - (3) Develops the transfer agreement and reviews it with AGC.
 - (4) Coordinates with other organizations and agencies.
 - (5) Transmits the transfer agreement to the associate or assistant administrator of the LOB/SO responsible for the requested software.
- d. **The Office of the Assistant Administrator for Information Services and Chief Information Officer.** This office:
 - (1) Organizes the staff level reviews for domestic transfers.
 - (2) Reviews the documentation presented by the clearinghouse for international transfers.
 - (3) Approves or rejects the transfer.
- e. **The Office of International Aviation.** This office:
 - (1) Serves as the clearinghouse for international requests for software.
 - (2) Coordinates the staff level reviews for international transfers.
- f. **The Office of the Chief Counsel.** This office:
 - (1) Reviews the transfer agreement.
 - (2) Supports determination of the ownership status for requested software.
 - (3) Assesses compliance of the proposed transaction with export controls.



Jane F. Garvey
Administrator

