

**Aircraft Certification
Guide for the
Use of Electronic Technology and
Alternative Methods of Storing Information**

1. PURPOSE.

a. This guide supplements FAA Order 8000.79, Use of Electronic Technology and Storage of Data. Use this guide to establish the procedure(s) to use when an applicant or approval holder asks to use electronic technology to satisfy information requirements for 14 CFR, part 21 activities or asks to use an alternative method of storing certification, production, and related information. The written procedure will be signed and kept on record. It may be included as part of existing mechanisms used to establish operating procedures with industry, such as delegated organization procedures manual, Partnership for Safety Plans, etc. Managers, Aviation Safety Inspectors (ASI), Aviation Safety Engineers (ASE), Flight Test Pilots (FTP), designees and support staff should use this Guide. Any local or directorate procedures developed need to be coordinated in accordance with Labor Management Relations Statute if working conditions will be changed outside the scope of Order 8000.79.

b. For the purpose of this guide, electronic technology means the use of electronic signatures; electronic interchange of restricted, technical or proprietary information; or electronic methods of information access or storage.

2. DISTRIBUTION. This guide is distributed to the branch level of the Aircraft Certification Service; to all Aircraft Certification Offices; to the branch level of the Aircraft Certification and Airworthiness Offices at the Mike Monroney Aeronautical Center; and to the Brussels Aircraft Certification Division.

3. APPLICABILITY. This guidance supplements FAA Order 8000.79 and will be applied from the date of publication for any of the activities contained in appendix 1, paragraph 1. Offices currently engaged in these activities are encouraged to adopt the procedures outlined in the guide. This guidance only relates to communications between FAA and industry, not between FAA offices.

4. RESPONSIBILITIES OF DIVISIONS AND DIRECTORATES WITHIN THE AIRCRAFT CERTIFICATION SERVICE.

a. **The Planning and Program Management Division, AIR-500,** will assign a headquarters focal point to support implementation of electronic technology and to establish signature authorities for written procedures between headquarters offices and industry.

b. Each Aircraft Certification Service Directorate will assign a directorate focal point to support implementation of electronic technology and to establish signature authorities for written procedures between directorate and field offices and industry.

5. DEFINITIONS. When used in this guide, these words and phrases have the following meanings:

a. Storage or Access Procedure means a method by which an applicant or approval holder and the FAA office with certificate management responsibility for that applicant or approval holder will implement the use of electronic signatures, information interchange or alternative methods of information storage in a particular manner.

b. Restricted, technical or proprietary information means the certification data and other information the applicant or approval holder shares with the FAA, such as technical specifications, process specifications, drawings, test reports, analyses, certification plans and compliance statements. This phrase does not include normal business communications, and this guide is not intended to imply that the exchange of electronic mail must be covered by any form of agreement between an FAA office and the applicant or approval holder.

c. Written procedure means some manner of recording the storage or access procedure to be used. In context of this guide, a written procedure may be part of some other mechanism, such as delegated organization procedures manual, a Partnership for Safety Plan, etc., or may be separate document.

d. Electronic signature means an electronic sound, symbol, or process, attached to or logically associated with restricted, technical or proprietary information, and executed or adopted by a person with the intent to sign.

6. RELATED ORDERS. Future revisions of the following orders will contain lists of the documents which may be stored at facilities not controlled by the FAA.

8110.42, Parts Manufacturer Approval Procedures

8150.1, Technical Standard Order Procedures

7. APPENDICES. The following appendices are part of this guide.

Appendix 1 - General Guidance

Appendix 2 - Description of Essential Elements

8. AUTHORITY TO CHANGE THIS GUIDE. Changes to this guide are to be coordinated through the electronic interchange focal points and submitted to AIR-100 and AIR-200 for coordination, approval and publication. Prior to publication, the revised guide must be coordinated with the Directives Management Officer (DMO) for revision control.

APPENDIX 1. GENERAL GUIDANCE

1. What is the General Requirement? As stated in FAA Order 8000.79, a written procedure is required between AIR offices and applicants or approval holders, when both parties agree to pursue the use of electronic technology and alternative methods of information storage to satisfy 14 CFR, part 21 requirements. These procedures will be signed and kept on record by the FAA and may be included as part of existing mechanisms used to establish operating procedures with industry, such as delegated organization procedures manual, Partnership for Safety Plans, etc. Each situation will be analyzed by the involved parties (see below) to determine the appropriate technical solution. No specific method or technical solution will be required. Written procedures will not be needed for “standard” communications via electronic mail.

2. Who is Involved in Coordination? Involvement of the following individuals will ensure legal and procedural consistency between different initiatives:

- ✓ FAA Project Manager: coordinates the development of a process and written procedure for the FAA, engages appropriate personnel and ensures compliance is maintained. Coordinates with directorate/division records management representative to ensure compliance with records management policy and to address new records schedules or requirements.
- ✓ Applicant or approval holder: includes suppliers, applicants, approval holders, or any other person complying with 14 CFR, part 21. Coordinates the development of the process and written procedures for the applicant or approval holder, engages appropriate personnel and provides funding and training for applicant or approval holder-specific hardware/software.
- ✓ FAA/AIR Computer Specialist: coordinates with FAA project manager, applicant or approval holder and appropriate automation security personnel during the developing stages of the written procedure. Works with the group to develop and test the hardware and software systems proposed. Ensures compatibility with existing FAA systems. Provides or coordinates purchases, training and maintenance of selected system.
- ✓ FAA Directorate/AGC Legal Representative: available to review the legal aspects of the written procedure. As the program matures, Legal review of the written procedure should become more routine.
- ✓ FAA Automation Security Personnel: responsible for ensuring that the proposals comply with existing security requirements per Order 1370.86. Performs office evaluations to ensure compliance with security requirements.
- ✓ FAA Regional/HQ/Center Information Technology Staff (AXX-40/ASU-500): responsible for ensuring that access to FAA systems (Wide Area Network, ADTN2000) is secure. Configures hubs and routers as necessary for data traffic.
- ✓ FAA Electronic Interchange/Storage/Signature Focal Point: responsible for:
 1. advising on guide/process/orders/coordination.
 2. advising on possible technical solutions.
 3. sharing existing solutions, written procedures and other information nationally.
 4. initiating changes to guide.

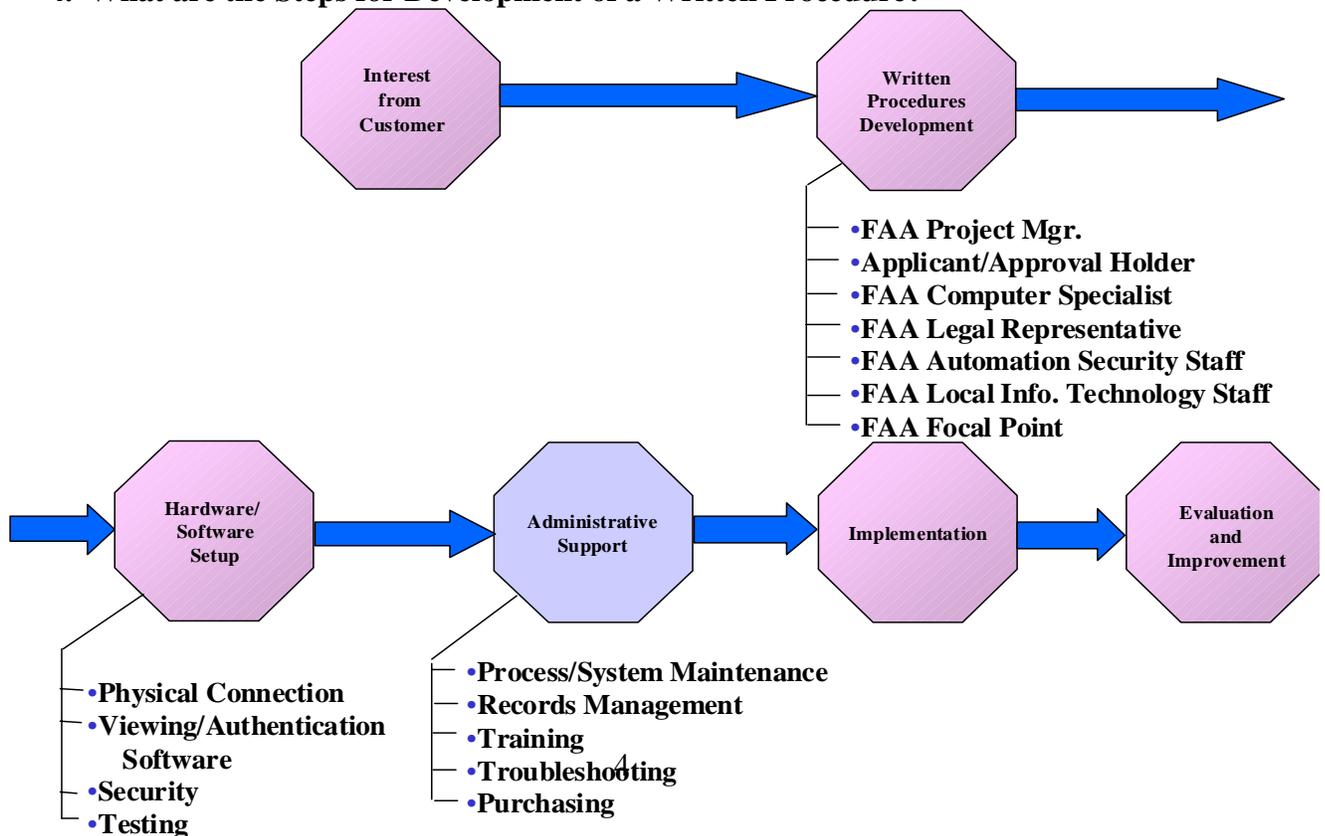
APPENDIX 1. GENERAL GUIDANCE (CONTINUED)

- 5. AVR-11: Responsible for the AVR automation architecture. If a written procedure involves any modification to the AVR network architecture, AVR –11 will be coordinated with via the Focal Point leads.

3. What are the Essential Points? A written procedure for the use of electronic technology and alternative methods of information storage will provide a record of the methods a FAA office and an applicant or approval holder use to do business. Each written procedure must, therefore, include a minimum of essential information about that process, and how the parties implement that process. Without these essential points recorded, individuals are left to question how the process was intended to function. While the form of the written procedure may vary from office to office, and even project to project, each written procedure must address the following items:

- How long will the procedure be in place?
- How can the FAA office, or the applicant or approval holder, end the procedure?
- What will be the effect of ending the procedure?
- What will be accessed, transferred, or stored?
- What process will be used?
- What architecture will be used?
- Who will have access to the information and how will it be secured?
- How will the data be controlled?
- Who will have ownership and custody of the information and data?
- What costs will be incurred?

4. What are the Steps for Development of a Written Procedure?



APPENDIX 2. DESCRIPTIONS OF ESSENTIAL ELEMENTS

Include answers to the following questions in the “Written Procedure”.

For how long a period of time will the procedure be in place?

The procedure could cover either a short term or have an indefinite end. If the procedure will cover only a definite period of time, then state that period of time in the procedure, and also describe how that length of time may be extended. If you envision a long-term arrangement with no definite end, then include a periodic review of the how well the procedure is working. That will prompt you to determine if any changes are needed.

How can the procedure be terminated before it comes to an end?

Describe how you will notify the applicant or approval holder that you want to stop using the procedure or update the procedure. Be sure to specify a specific time period after you give notice that will be the time when you will stop using the procedure. Be sure that this time period is sufficient to allow you to transition to a new method of data exchange or storage. You may want to limit the reasons either the FAA or the applicant or approval holder can stop using the procedure, or you may allow either side to stop using the procedure for any reason.

What will happen when you stop using the procedure?

It is also important to describe what will happen when you no longer use the procedure. What actions must be taken upon ending the procedure? This “clean up” detail should describe, for example, what happens to the data transferred to the FAA, what will happen to any equipment or data lines that were installed to facilitate data access or transfer, and what will happen to any software used for the data interchange.

What will be accessed, transferred, or stored?

Define what data will be accessed, transferred, or stored. Written procedures must include a provision that defines the scope of the data that will be encompassed by the written procedure. Specific definitions of data are best because both the agency and the company then know the exact limits of the procedure. If circumstances warrant a change to that definition to expand or reduce the amount of data involved, then change the written procedure. If you want to use an electronic signature in the certification process, use this part of the written procedure to define what documents will be affected and what data will constitute an acceptable signature. Leave for the next section the details of how the signature will be placed on the document.

APPENDIX 2. DESCRIPTIONS OF ESSENTIAL ELEMENTS (CONTINUED)

What process will be used?

Describe how the written procedure will be implemented. This is the place you should describe what your office will do and what the applicant or approval holder will do to accomplish the desired objective. It is important here to be as specific as possible about how the data access or interchange or storage will function. If you will use electronic signature, describe how that will be accomplished, who will do what and when, using as many sub-sections as is necessary. For example, in an interchange procedures document covering the FAA's access of data stored on a company's server, here would be the place to say that when new data is placed on the server the company will tell FAA engineers that new information is now available for access. A written procedure covering the use of electronic signature will detail how the signature(s) will be placed on the document. A written procedure should requested that the data will be produced by the applicant within a specified time period.

What architecture will be used?

Describe the hardware and software requirements, ensuring that the data remains readable to FAA or compatible with FAA applications. This will also be the place that you could cite other more technically detailed documents that serve as supporting documents for how the access or interchange will take place. In that way, the day to day operations may be modified by changes to the supporting document without changing the written procedure or the document that contains it.

Who will have access to the information and how will it be secured?

Specify who will have access to the data covered by the written procedure and for what purpose. Remember to expressly state here that the FAA can use the data for any purpose, including review of applications for PMA on the basis of identity. In addition, this is the place you should describe the data recovery process in the event of the loss of data, backup of data, and safeguards against unauthorized access. Remember to specify how often archived data will be checked to ensure continued access to guard against volatility of storage media or obsolescence of hardware or software. In addition, use this section to state that the interchange of data or the use of electronic signature must comply with applicable FAA Security standards. Also, if the applicant or approval holder moves data from one system to another the records that were produced by the old system must remain accessible in a format usable to the FAA. Ensure there are no restrictions on FAA access to the data.

APPENDIX 2. DESCRIPTIONS OF ESSENTIAL ELEMENTS (CONTINUED)**How will the data be controlled?**

Ensure that revision control is maintained by industry and identified.

Who will have ownership and custody of the information and data?

FAA access to the data does not result in the data becoming an “agency record” for the purpose of the Freedom of Information Act (FOIA). If the server will be housed in an FAA facility, it is important to note that the FAA has neither the authority to change the data contained on the server, nor physical control over server other than to provide for the environmental and electrical power needs. With that stated, the data on the server will remain the property of the applicant or approval holder and not become an agency record subject to requests under the FOIA.

What costs will be incurred?

State what dedicated capital investments are needed to accomplish the data access or interchange and note that the applicant or approval holder must pay for these investments. The FAA may pay, however, for capital investments or software purchases that are not dedicated to a single application. In addition, if the data interchange will incur ongoing operational costs, those costs must be detailed as to their nature, but not necessarily the exact dollar amount. The applicant or approval holder must pay for operational costs if they provide benefit to only that applicant. The FAA may pay for reasonable operational costs that have application to more than a single applicant or approval holder. Coordinate with an FAA Contracting Officer or local automation budget personnel to ensure that any obligation of funds conforms with existing laws and agency policy. The written procedure is not a contract, lease, cooperative agreement or other transaction as those terms are used in section 106(l)(6) of Title 49 of the United States Code. This is only a record of the procedure that an FAA Office and either an applicant or approval holder will use to effect electronic data access or interchange and/or non-standard storage.