

APPENDIX II

20. INTERFACE CONTROL

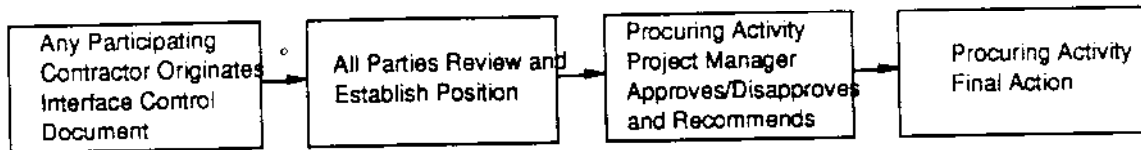
20.1 Purpose. This appendix provides the criteria and guidance for the establishment of interface control.

20.2 Scope. Guidance for documentation and control of all physical and functional interfaces of system, equipment, computer software, facilities, and installation requirements are provided in this appendix.

20.3 Applicability. When specified in the contract, the criteria and guidance of this appendix are applicable to all contractors whose configuration items interface with other configuration items of another contractor or procuring activity.

20.4 General guidance. The procuring activity will determine the requirements for the control of interfaces and installation during the system requirements process or equivalent phase. The responsibility for developing configuration identification covering system interface requirements may be contractually delegated in whole or in part to the Interface Control Working Group (ICWG) secretariat.

- a. Interfaces detailed during the system requirements process phase shall be treated as system criteria, and shall not be established as part of the interface control activity. This exclusion allows contractors and/or the Government the flexibility to negotiate interface agreements among themselves, within the limits of the established system criteria. (See figure 4.)
- b. Programs entering the acquisition phase can be broken into two categories as follows:
 - (1) Programs requiring a total hardware and computer software development cycle (encompassing a system/equipment/computer software design phase).
 - (2) Programs not requiring a total development cycle (where program progresses directly from the system requirements process to production).
- c. The procuring activity shall contractually specify all procedures for an interface control activity which may include the use of an Interface Control Working Group (ICWG). The chairperson of the ICWG will be designated by the procuring activity Project Manager with the interface control contractor as ICWG Secretariat. The ICWG Secretariat will be responsible for status accounting and reporting.



Notes:

1. Any Participating Contractor Originates Interface Control Drawing
2. All Affected Parties Review Drawing and Submit Recommendation to Procuring Activity Technical Officer or the Interface Control Contractor
3. Procuring Activity Project Manager or the Interface Control Contractor Reviews Drawing and, if it Complies with Existing Contractual Requirements, Approves or Disapproves
 - (a) If Drawing Is Acceptable by Project Manager and All Affected Parties, the Drawing Is Forwarded to the Interface Control Contractor for Review and Final Action
 - (b) If Disagreement Exists within the Group of Affected Parties, the Procuring Activity Project Manager Forwards the Document with Recommendations to the Interface Control Contractor for Resolution

Figure 4 Interface Control Documents

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- d. For those programs where the use of an ICWG is not applicable, the procuring activity will contractually specify other procedures for an interface control activity.
- e. Relationships, responsibilities, and requirements will be as specified in the contractual statement of work.

20.5 Interface Control Working Group (ICWG).

20.5.1 The ICWG serves as the official communications link between program participants to resolve interface problems, document interface agreements. The ICWG shall consist of at least one member from each of the contractors and Government agencies participating in the system development. A roster of all affected contractors and agencies represented on the ICWG will be maintained by the procuring activity and this information provided to all participants.

20.5.2 The establishment of system interface control by the ICWG requires the identification and definition of interfaces, scheduling, preparation, approval, release, and control of formal interface documents.

20.6 Interface control documents. The establishment of system interface control by the procuring activity requires the identification and definition of interfaces, scheduling, preparation, approval, release, and control of formal interface documents. Interface control documents shall be used to record the design agreements between system-participating contractors as authorized by the procuring activity. Interface control documents, along with production drawings, diagrams, facility construction drawings, and specifications, shall provide a means to evaluate and control all mutually interdependent/interacting design parameters and interfaces between participants' equipment/computer programs or facilities.

- a. Interface control documents are used to control certain interfaces, where a single participant controls the design of both configuration items, when deemed necessary by the procuring activity.
- b. Interface control documents and revisions thereto will be scheduled for completion at the earliest need of the program to support any participating contractor or agency. The documents and/or revisions will be scheduled and approved by the originator to support participating contractor's preliminary design reviews at the earliest need of the program. They shall be scheduled for completion, released by the originating contractor, signed by the interfacing participants, and approved by the ICWG Chairman or FAA Project Manager prior to the time of the applicable critical design review. All documents/revisions shall be complete, approved, and system-released prior to the time of the physical configuration audit.

- c. Individual interface control documents developed under the procedures of this appendix shall be maintained by the originating contractors, to reflect all approved changes. However, the interface control contractor shall maintain an up-to-date, reproducible file of all interface control documents.
- d. Interface control documents shall reflect the effects of any waiver or deviation on the interface depicted, but shall not be used as the primary means of documenting such waivers, and shall not be used in the fabrication of hardware.
- e. Interface control documents shall be prepared in accordance with FAA-STD-025. However, the procuring activity may contractually specify the details and/or drawing instructions as it deems necessary.
- f. Interface control document identification numbers shall be provided by the FAA to the interface control contractor on an as required basis.

20.7 Interface control responsibility delegation. Participating contractors procuring activities shall be designated prime and collateral responsibilities for the ICWG. See the matrix (figure 5). The participating contractors and procuring activity have collateral responsibilities where so indicated.

20.7.1 Exclusion. The ICWG shall not have the authority to approve fixes to facilities, computer software, or equipment required because of non-conformant interface conditions discovered in the field or at equipment/computer software acceptance. However, the ICWG shall assist the procuring activities responsible for approval action upon request, and shall review and recommend fixes for resolution of interface incompatibilities.

20.8 ICWG control sheet. The ICWG actions in connection with interface control documents shall be recorded on a form similar to figure 6. Any other form may be used as long as it provides the necessary information.

Responsibilities	Participating Contractors	Procuring Activity
Provide materials and services to manage	X	X
Establish policy and procedure and chair ICWG		X
Administrative control and processing ICWG	X	X
Prepare ICD authorized by procuring activity	X	X
Assist in resolution of interface problems	X	X
Establish complete interface control requirements	X	X
Use specs and drawings to identify interfaces	X	X
Review interface recommendations with ICWG reps	X	X
Recommend required controls including gages	X	X
Request procuring activity direction	interface control contractor	
List approved ICDs in system ICD	interface control contractor	
Assign ICD preparation responsibility	interface control contractor	
Obtain ICD agreements and signatures	X	X
Final ICD review, approval, and release		X
Schedule and document ICWG actions and update	interface control contractor	
Issue meeting agenda 5 days before meeting	interface control contractor	
Issue meeting minutes 5 days after meeting	interface control contractor	
Participate in and support ICWG meetings	X	X
Identify and evaluate class 1 changes for impact	X	X
Evaluate problems and issue action items	X	X
Prepare and distribute approved ICD	interface control contractor	
Maintain file of ICDs	interface control contractor	
Prepare and maintain master tooling documents	X	
Maintain ICWG activity status	X	
Support participating contractor activities	X	
Conduct fit checks	X	

Notes:

ICWG responsibilities of the interface control contractor, participating contractors, and the procuring activity include: The interface control contractor has the prime responsibility in seeing that all of the above actions are accomplished. He has the sole responsibility for those items where the term "Interface control contractor" appears. An "X" in the above columns indicates that the participating contractors or the procuring activity, or both, have collateral responsibility for the actions shown.

Figure 5. Matrix of Interface Control Responsibilities

ICWG Control Sheet

Brief Description of Functional Physical Interface	Agency Affected Cont/Govt	Interface Control Drawing			Tooling Gage Documents, If Affected	ICWG Reviews			ICWG Action Item No.	ICD App Date
		No.	Title	Rev		Participating Agencies	Date	Date Mins Distr		

Figure 6. Example of ICWG Control Sheet