

GLOBAL POSITIONING SYSTEM

INTERFACE CONTROL WORKING GROUP (ICWG) CHARTER

for

DEVELOPMENTAL & OPERATIONAL INTERFACE CONTROL DOCUMENTS

GP-03-001

Revision A 20 April 2006

// SIGNED //

RICHARD L. REASER, JR., Col, USAF Deputy System Program Director Navstar GPS Joint Program Office

Headquarters Space and Missile Systems Center (SMC) Navstar GPS Joint Program Office (SMC/GP) 483 North Aviation Boulevard El Segundo, CA 90245-2808 U.S.A.

DISTRIBUTION STATEMENT A. APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

1.	INT	RODUCTION	1		
2.	REFERENCE1				
3.	INITION	1			
	3.1	Interface Types			
		3.1.1 Type I Interfaces.			
		3.1.2 Type II Interfaces			
		3.1.3 Type III Interfaces			
	3.2	Interface Documents			
		3.2.1 Interface Specification (IS)	3		
	3.3	Interface Control Working Group (ICWG)			
		3.3.1 Public ICWG			
		3.3.2 Interface Control Contractor (ICC)/Agency (ICA)	3		
		3.3.3 Interface Responsible Contractor (IRC)/Organization (IRO)	4		
4.	RES	PONSIBILITIES	Δ		
т.	4.1	ICWG Responsibilities			
	1.1	4.1.1 ICWG Functional Responsibilities			
		4.1.2 ICWG Meetings			
5.	DO	CUMENTATION	7		
5.	5.1	Interface Control Document (ICD)			
	5.2	Request for Change (RFC)			
	5.2 5.3	Revision Notices			
	5.5	5.3.1 Proposed Interface Revision Notice (PIRN)			
		5.3.2 Interface Revision Notice (IRN).			
	5.4	Comment Matrix			
	5.5	Minutes			
	5.6	Interface Control Action Plan (ICAP)			
	5.7	Letter of Exception (LOE)			
	5.8	Competition Sensitive Data			
	5.9	Security Classification and Special Handling Markings	8		
		Releasability of Documentation			
6.	PRO	CEDURES	8		
0.	6.1	ICD Development and Approval Process			
	6.2	ICD Change Control Process			
	0.2	6.2.1 Out-of-Scope Changes			
		6.2.1 Change Proposal Flow Process	1		
	6.3	Problem Resolution Process			
7			1		
7.	AU	14 NONYMS	+		

TABLE OF CONTENTS

GP-03-001A 20 April 2006

ATTACHMENT 1: DOCUMENTATION AND OTHER GUIDELINES

A1.1.PREPARATION OF GPS ICDs	
A1.1.1 Document Titles	
A1.1.2 Document Numbers	
A1.1.3 Title and Revision Block Format	
A1.1.4 Technical Format and Content	
A1.1.4.1 Page Numbers	
A1.1.4.2 Figure and Table Numbers	
A1.1.4.3 Commercial and Government Entity (CAGE) Code	
A1.1.5 Drawing Format	
A1.1.6 ICD Key Participants	
A1.2 Revision Notices	17
A1.3 ICWG Action Items/Plans	17

TABLES

Table 1	ICWG Functional Responsibilities
---------	----------------------------------

FIGURES

Figure 1	GPS Interface Types	2
	Change Control Process	
Figure A1-1	Sample ICD Cover Sheet	
-	Sample PIRN Approval Sheet	
Figure A1-3	Sample IRN Cover Sheet	20
Figure A1-4	Sample ICAP Format	

1. INTRODUCTION. This charter outlines and specifies procedures and requirements regarding Global Positioning System (GPS) Interface Control Working Group (ICWG). It applies to interface responsible contractors/organizations, government agencies (e.g. the Department of Defense (DoD), Department of Transportation (DOT)), and other contractors/organizations involved in the development, deployment, and operation of Navstar GPS assets. These assets pertain to the Space Segment (SS), Control Segment (CS), and User Segment (US).

2. REFERENCES

MIL-HDBK-61A. Configuration Management Guidance MIL-STD-961E. DOD Standard Practice, Defense and Program-Unique Specifications and Format Content

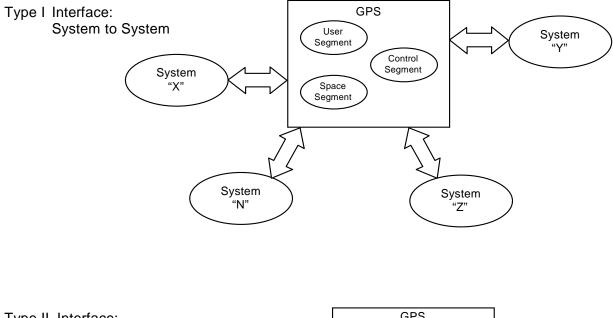
3. DEFINITION

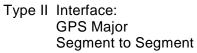
3.1 Interface Types. Interfaces controlled by this charter may be one of three types, as noted in Figure 1. The primary distinction between the types of interfaces arises from the contractual relationship characteristic to each and the level of program management involvement required to resolve differences in the course of interface definition.

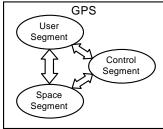
3.1.1 Type I Interfaces. These interfaces exist between GPS system/segments/configuration items (CIs) and other systems/segments/CIs that are not the responsibility of the GPS Joint Program Office (JPO). MIL-HDBK-61 defines these interfaces as System A to System D type interfaces. Direct contractual lines of authority and responsibility link Program Managers, within the corresponding agencies/offices, to contractors, who have responsibility for the CI on their respective sides of the interface. Responsibility and authority for technical direction across the interface, however, relies on negotiated Memorandums of Agreement (MOA)/ Memorandums of Understanding (MOU).

3.1.2 Type II Interfaces. These interfaces exist between GPS segments/CIs and other GPS segments/CIs, all within the responsibility framework of the GPS JPO. These intra-system interfaces are typically not under a single contract. MIL-HDBK-61 defines these interfaces as System A to System C type interfaces. The Type II interface falls wholly under the purview of the GPS System Program Director (SPD), but the Office of Primary Responsibility (OPR) and lines of contractual authority reside under separate segment contracts.

3.1.3 Type III Interfaces. These interfaces exist between CIs within a GPS segment and are under the same segment contractual framework. MIL-HDBK-61 defines these intra-segment interfaces as System A to System B type interfaces. The Type III interface falls wholly under the purview of the GPS segment manager, along with the GPS SPD, but lines of contractual authority reside within each segment contract.







Type III Interface: GPS Segment Internal

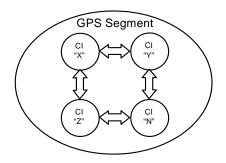


Figure 1. GPS Interface Types

3.2 Interface Documents. Interfaces are documented in Interface Control Documents (ICDs). ICDs shall be the formal means of establishing, defining, and controlling interfaces and for documenting detailed interface design definition for the GPS program. For each of the three interface types, the ICD typically exists between CIs to establish and specify interface definition and design. CIs are the contractual responsibility of development, production, and/or sustainment contractors, who are under the management of their respective government agency program offices.

3.2.1. Interface Specification (IS). IS is a specific type of ICD. IS specifies a single government office/agency as the only necessary and required approval authority for the document. However, the procedure and the process for development, control, and maintenance is same for both ICD and IS. The term ICD will be used generically to refer to both ICD and IS.

3.3 Interface Control Working Group (ICWG). ICWG shall consist of GPS JPO OPR, Interface Control Contractor (ICC)/Agency (ICA), Interface Responsible Contractor (IRC)/Organization (IRO), government agencies/organizations, and other non-government organizations that contribute to define, develop, implement, impact, and maintain an interface. ICWGs shall be established to facilitate interface definition, design, control and to address and resolve interface issues and problems that cannot be resolved through associate contractor daily working procedures. Furthermore, ICWGs shall be established to assist management and technical organizations with planning, scheduling and executing interface activities. The ICWG shall serve as a forum to develop and provide interface requirements, as well as focus on interface detail definition and issues. Each affected government agency, contractor, and other organization shall assign an ICWG representative. Attendance and participation in any ICWG meeting or activity is dependent on the interface issue(s) to be resolved. ICWG representatives shall have the technical competency and authority to commit their respective organizations to technical, planning and schedule positions within the constraints of applicable contracts or agreements.

A primary function of the ICWG is to ensure compatibility between interfacing CIs. Whenever compatibility cannot be attained in the ICWG arena, the issues, contractors'/organizations' positions, impacts for each course of action, and the ICWG chairperson's recommendation shall be forwarded to the GPS JPO.

3.3.1 Public ICWG. ICWGs for documents that are publicly releasable shall be referred to as Public ICWGs, which are structured the same as the ICWG but with a few additional requirements. The additional requirements include coordinating meetings and documents through available public media such as the GPS JPO Public ICWG internet website. Formal announcements regarding Public ICWGs shall be coordinated with the designated government OPR and distributed through the Federal Register.

3.3.2 Interface Control Contractor (ICC)/Agency (ICA). The GPS JPO will determine if an ICC or government ICA is needed to support ICD development and maintenance. The ICC may be a contractor responsible for a major CI involved in a particular interface or an independent contractor with systems engineering and/or some integrating responsibility for the system. An ICC for an ICD will be identified in specific contracts. The ICC/ICA will have the responsibility of co-chairing the related ICWG with the designated government OPR.

3.3.3 Interface Responsible Contractor (IRC)/Organization (IRO). IRC/IRO is a contractor (or an organization) that has technical and/or contractual responsibility for the CI on its respective side of the interface.

4. **RESPONSIBILITIES**

4.1 ICWG Responsibilities The ICWG shall serve as forum for exchange of interface data; identify and resolve interface problems; establish and document interface agreements; assess interface impact of design changes.

4.1.1 ICWG Functional Responsibilities. Table 1 presents the responsibilities of the ICC/ICA, responsible contractors/organizations, procuring activity, and other ICWG members. The ICC/ICA has prime responsibility for all activities, while responsible contractors/organizations, procuring activity, and other ICWG members have collateral and supportive responsibility where indicated. In addition,

a. The ICC/ICA, in collaboration with and with the assistance of supporting agencies, contractors, and ICWG members, will maintain and ensure compatibility of ICDs to the operational GPS constellation or with a future planned constellation.

b. The ICC/ICA shall; prepare, maintain, and update ICD; prepare, coordinate, and process proposed changes to ICD; co-chair and conduct ICWG meetings; prepare, distribute agendas prior to and publish minutes after meetings; prepare and submit the ICD or IRN, that has been coordinated/approved by the ICWG or as requested by the government OPR, to the procuring activity for CCB approval.

c. If significant problems cannot be resolved at the ICWG level, the ICC/ICA shall coordinate with the government OPR to elevate the problems to the GPS JPO.

d. ICWG members shall participate to; identify interfaces and interface requirements; prepare, review, and evaluate ICDs; review, prepare inputs, and evaluate proposed changes to ICDs; plan and schedule required activities; resolve open issues and action items; approve ICDs and changes as requested by ICC/ICA.

4.1.2 ICWG Meetings. ICWG meetings shall be convened to establish interface definition, develop interface control plans, resolve interface problems between participants, and coordinate other interface control activities. Any ICWG member may propose and request an ICWG meeting to address specific subjects that require discussion and agreement by multiple organizations. The request will be submitted to the ICC/ICA and/or the government OPR.

	Table 1. ICWG Func	tional Respons	sibilities (Page 1	of 2)	
	ICWG Functional Responsibilities	Interface Control Contractor/ Agency	Interface Responsible Contractor/ Organization	Procuring Activity (OPR)	Other Members
1.	Provide materials and services to support interface management	Х	Х	Х	As Required
2.	Request procuring activity direction, as needed, to support ICWG activities	Х			
3.	Provide ICWG direction as needed			X	
4.	Assign responsibilities to ICWG Representatives	Х			
5.	Develop schedules/ICAPs for ICD preparation	Х		X	
6.	Establish and exercise administrative control of ICDs	Х			
7.	Request ICWG Meeting	Х	Х	X	Х
8.	Schedule and Conduct ICWG				
	a. Coordinate and document ICWG actions and updates	Х			
	b. Issue ICWG meeting agenda five days prior to meeting	Х			
	c. Participate in and support ICWG meeting	Х	Х	X	Х
	d. Assist in resolution of interface questions and problems	Х	Х	X	Х
	e. Issue ICWG meeting minutes within 10 days following the meeting	Х			
	f. Follow-up on coordination requests to ensure timely submittal of responses	Х			
	g. Identify to the procuring activity any persistent obstacles to concurrence and recommend actions.	Х			
	h. Prepare submittals to procuring activity for consideration of issues that cannot be resolved at ICWG level. Document issues, positions and recommend solutions.	Х	As Required		
9.	Develop ICDs using Attachment 2 as a guide				
	a. Identify interface requirements	Х	Х	X	X
	b. Establish complete interface technical requirements	Х	Х	X	Х
	c. Review interface characteristics with ICWG representatives	Х	Х	Х	Х
	d. Determine problems/issues and assign action items	Х			
	e. Maintain cognizance of program schedule information relevant to interfaces.	Х		Х	
	f. Disseminate ICD program schedule information to assure timeliness of activity in support of program goals.	Х		X	

Table 1. IC wG Functional Responsibilities (Fage 2 of 2)						
ICWG Functional Responsibilities	Interface Control Contractor/ Agency	Interface Responsible Contractor/ Organization	Procuring Activity (OPR)	Other Members		
10. Identify and evaluate changes to ICDs						
a. Implement ICD changes in accordance with the change control processes of this charter.	X		Х			
b. Identify change requirements	Х	Х	Х	Х		
c. Evaluate changes for interface impact	Х	Х	X	Х		
d. Determine if change is in-scope/out-of-scope of contracts	X	Х	Х			
e. Request procuring activity direction for out- of-scope changes	X					
f. Prepare and submit issues that cannot be resolved at ICWG level to procuring activity	X					
 g. Coordinate companion change schedules of submittals to support earliest associate contractor need dates 	Х	As Required	Х			
h. Prepare and process PIRN/Revised ICD	Х					
11. Obtain ICD final approval and release document(s).						
a. Finalize ICD to reflect technically resolved issues	X					
b. Obtain approval signature(s) on finalized ICD or IRN	X		Х			
c. Release and distribute approved ICD or IRN	Х		Х			
d. Assure released ICDs are listed in system level documents	As required	As required	Х			
e. Maintain ICD files	Х					
12. Review ICWG charter periodically and recommend additions/changes	Х	Х	Х	Х		
13. Recommend to the procuring activity additional interfaces that require documentation and control	Х					

Table 1. ICWG Functional Responsibilities (Page 2 of 2)

5. DOCUMENTATION

5.1 Interface Control Document (ICD). ICDs shall be the formal means of establishing, defining and controlling interfaces and for documenting detailed interface design definition for the GPS program. Attachment II of this document provides a guide in preparing ICDs.

5.2 Request for Change (RFC). "Request for Change" or RFC is a generic term used to identify any modification/change associated with a technical change to a baseline.

5.3 Revision Notices. Updates to ICDs shall be initiated and reflected via a Proposed Interface Revision Notice (PIRN) and Interface Revision Notice (IRN).

5.3.1 Proposed Interface Revision Notice (PIRN). Requested changes to an approved ICD shall be reflected via a PIRN. PIRNs are used for ICWG coordination and review. In being a proposed document, the PIRN is used to work out the technical details/definition of the interface change being proposed.

5.3.2 Interface Revision Notice (IRN). After the PIRN is coordinated with the ICWG and approved by the IRCs/IROs, an IRN is created. An IRN is submitted to the GPS JPO CCB for approval. An IRN is not used to work out the technical details/definition of the interface change being proposed, but is instead reviewed to determine if the JPO will commit to making the proposed change part of the baseline.

5.4 Comment Matrix. A Comment Matrix will be used to document and submit all comments against the latest released version of a PIRN/IRN/ICD, as well as to provide disposition of each comment.

5.5 Minutes. Minutes will include a complete list of attendees and provide a summary of the meeting's discussion, to include any issues and action items addressed, along with any decisions made at the ICWG meeting.

5.6 Interface Control Action Plan (ICAP). An ICAP is a documented schedule that identifies problems and outlines a plan of action to resolve these problems. For operational ICDs, the resolution plan should cite other ICDs/interfaces impacted by the planned action and identify associated PIRNs. ICAPs will be closed out by the ICWG chairperson upon satisfactory resolution of the subject problem. (See Figure A.1-3 for an example of an ICAP)

5.7 Letter of Exception (LOE). The LOE delineates items, by paragraph number with specific description and rationale, that are out-of-scope of contract. IRC/IRO will use LOE to identify items that are not part of their approval of the PIRN/ICD.

5.8 Competition Sensitive Data. IRCs who are in competition with another contractor may mark their interface input data "Competition Sensitive," when warranted. The sensitive marking shall only appear on that portion of the input data. Competition Sensitive Data shall be controlled by the ICC/ICA such as not to disseminate the information to other competing contractors under any circumstances or other non-government members of the working group without prior permission of the originating contractor or the JPO cognizant director. Concerned parties may enter into a non-disclosure agreement if so desired.

Upon incorporation of Competition Sensitive Data into a draft or formal ICD by the ICC/ICA, data within the ICD will not be considered or marked Competition Sensitive. Competition Sensitive Data/Documents provided by a competing contractor to support preparation of the ICD shall retain its Competition Sensitive marking and control regardless of the use of some or all Competition Sensitive Data in the ICD. Competition Sensitive Data will not be released under the Freedom of Information Act (exemption 5) or otherwise until after award of the initial production of contract of the UE and SS and the Full Scale Development of the CS. Competition Sensitive Data shall not be construed as Proprietary or Limited Rights data.

5.9 Security Classification and Special Handling Markings. The security classification level of ICDs and revision notices shall be consistent with the Navstar GPS Security Classification Guide.

5.10 Releasability of Documentation. Distribution and releasability of ICDs and revision notices with limited distribution shall be under the control of the GPS JPO.

6. PROCEDURES.

6.1 ICD Development and Approval Process. ICDs shall be prepared to define and control interface requirements and detail interface design. The IRCs/IROs responsible for interfacing systems/segments/CIs shall develop ICDs jointly with the procuring activity, other ICWG members, and any identified ICC/ICA. The following identifies some of the necessary procedures in this development.

a. The GPS JPO shall assign a unique document title and number for each required ICD.

b. The GPS JPO shall identify and designate ICC/ICA responsible for the development of ICD.

c. Designated ICC/ICA, with the procuring activity, shall identify and establish ICWG.

d. ICC/ICA shall develop the ICD with ICWG input, in accordance with the applicable contract, utilizing Attachment I of this charter as a guide.

e. Designated ICC/ICA shall distribute the draft ICD to each ICWG participants and government agency/contractor as identified in the established ICWG membership. For public ICWGs, the designated ICC/ICA shall coordinate with the government OPR to send out an announcement through the Federal Register.

f. Each recipient of an ICD, including IRCs/IROs, shall review the ICD and document their findings in a comment matrix to be submitted to the ICC/ICA, with recommendations for changes or approval.

g. Designated ICC/ICA shall respond to all comments contained in comment matrix within 30 days.

h. ICC/ICA shall coordinate and conduct any needed ICWG meetings.

i. ICC/ICA shall develop, publish, and distribute an agenda scheduling an ICWG meeting. ICC/ICA shall prepare, maintain, and distribute ICAPs for the development of ICD. ICAPs should be reviewed and updated frequently. Attachment 1 provides further guideline regarding ICWG action items.

j. Open issues that cannot be resolved by the ICWG will be forwarded to the GPS JPO with ICWG chairperson recommendations concerning issue resolution.

k. Upon resolution of all open issues, ICC/ICA shall finalize ICD.

1. ICWG chairperson shall obtain appropriate ICWG approval and forward the final ICWG approved ICD to SMC/GPE Configuration Management Office (CMO) for the GPS JPO CCB review and approval.

m. ICC/ICA shall release and distribute the CCB approved ICD(s) to the ICWG members.

When coordinated and approved by ICWG, an ICD represents a formal agreement that:

a. System performance will be achieved by proper allocation of requirements across or at the interface(s).

b. The designs of the interfacing configuration items or facilities are consistent with the requirements specified by the ICD.

c. The interfacing design requirements and detail design definition are functionally, physically and environmentally compatible with one another.

d. No ICD design change that affects interface compatibility will be made without the affected participants formally agreeing upon these changes.

6.2 ICD Change Control Process. This process is outlined in Figure 2. Changes to an approved ICD shall be reflected via a PIRN, resulting in an IRN or revised ICD. Designated ICC/ICA shall maintain and update ICD. The following identifies some of the necessary procedures in this development.

a. The GPS JPO shall identify and designate ICC/ICA responsible for the maintenance and update of ICD.

b. ICC/ICA shall maintain and update ICWG membership.

c. Any IRC/IRO or other ICWG member may submit PIRN inputs to the ICC/ICA. If necessary, the ICC/ICA and government OPR will convene an ICWG meeting to address any issues that arise in conjunction with the proposed changes.

d. ICC/ICA shall develop and prepare PIRNs with ICWG input utilizing Attachment I of this charter as a guide.

e. ICC/ICA shall coordinate and distribute PIRNs to each IRC/IRO, other ICWG members, and government agencies as identified in the established ICWG membership. ICC/ICA shall prepare a PIRN approval sheet (see Figure A1-2 for an example) and distribute it to IRCs/IROs. For public ICWGs, the designated ICC/ICA shall also coordinate with the government OPR to send a formal announcement through the Federal Register.

f. Each recipient of a PIRN shall review the PIRN and document their findings in a comment matrix to be submitted to the ICC/ICA, with recommendations for changes or approval. IRCs/IROs shall also use the PIRN approval sheet to indicate the review result.

g. IRCs/IROs shall review all PIRNs and evaluate for impact to the interface, as well as impact to other ICDs. Once impacts are identified, the change to an ICD shall be classified as either in or out-of-scope. In-scope changes are those, which have no impact on contractual technical requirements, cost, and schedule. Out-of-scope changes are those that have a contractual impact, and are often associated with a change proposal. IRCs/IROs shall use LOE to document out-of-scope items and submit the LOE to the ICC/ICA.

h. ICC/ICA shall evaluate and respond to all comments contained in comment matrix within 30 days.

i. ICC/ICA and/or government OPR shall evaluate submitted LOEs and provide preliminary assessment of contractor-submitted exceptions. If necessary, prepare a revised PIRN/ICD, with ICWG meeting/input as required, to eliminate the scope issues that prompted the LOE.

j. The ICWG chairperson shall act as mediator to resolve all PIRN/ICD problem areas. ICC/ICA shall coordinate and conduct any needed ICWG meetings to discuss and resolve problem areas. If resolution cannot be achieved at this level, the issue will be forwarded to the GPS JPO with ICWG chairperson recommendations concerning issue resolution.

k. Upon resolution of all open issues, ICC/ICA shall obtain appropriate ICWG approval and shall prepare an IRN reflecting the final ICWG approved PIRN. (See Figure A1-3 for an example of IRN cover page.)

I. The IRN, reflecting the ICWG approved PIRN, shall be forwarded to the SMC/GPE CMO for the GPS JPO CCB review and approval.

m. ICC/ICA shall release and distribute the CCB approved IRN to ICWG members.

6.2.1 Out-of-Scope Changes.

a. ICC/ICA shall coordinate LOE with the procuring activity and GPS JPO contract letter will be sent to the IRC for initial assessment of cost and/or schedule impact.

b. In response to the request, IRC shall submit initial cost and schedule impact assessment for the out-of-scope items.

c. All ICD changes that require contractual action, regardless of the ICD status, shall be implemented using change proposals, e.g. Engineering Change Proposals (ECPs), Task Change Proposals (TCPs), or Contract Change Proposals (CCPs).

6.2.1.1 Change Proposal Flow Process. The following paragraphs discuss general policies and procedures regarding change proposal development:

a. Change proposals impacting an ICD shall undergo preliminary coordination among all involved IRC/IRO prior to submittal to the procuring activity. Companion change proposals will be scheduled to arrive and allow for concurrent CCB action.

b. The "Date by Which Contractual Authority is Needed", or Authority to Proceed (ATP) date, is the primary factor in establishing the preparation and processing schedule for any prospective change. This ATP date must be defensible.

c. The contractor originating a change proposal should provide attached PIRN rationale for revised ICDs, so that all IRCs can determine the degree of impact (if any) of the proposed change.

d. When other contractors are impacted, preparation of companion change proposals shall be initiated.

e. All contractors preparing companion change proposals shall interchange information by PIRNs, semi-final or final versions of their change proposals (excluding cost and other proprietary information), and obtain mutual concurrence prior to submittal to the procuring activity. Companion change proposals shall be cross-referenced to ensure requirement change traceability across the ICD.

f. Final coordination of change proposals and companion change proposals shall be accomplished prior to formal submittal.

g. Formal copies of all change proposals (in the form of a PIRN) shall be sent to the procuring activity and IRCs at the same time.

h. After a contractor submits a PIRN for approval, other contractors have 45 working days to indicate concurrence or non-concurrence.

6.3 Problem Resolution Process. Interface problems that cannot be resolved at the contractors' level shall be referred to the ICWG for resolution. The ICWG chairperson shall coordinate with the government OPR and refer problems that cannot be resolved at the ICWG level, including any LOEs, to the GPS JPO. For any problems/issues forwarded to the JPO, the working group chairperson will provide viable alternative problem solutions and an impact assessment for each course of action. The GPS JPO will assess the problem, review alternative solutions as provided, and provide appropriate guidance or direction.

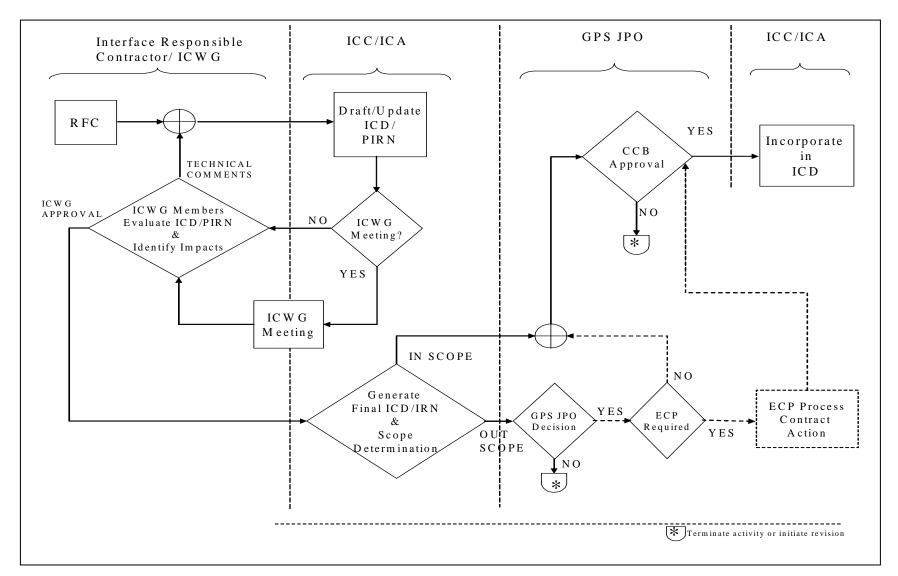


Figure 2. Change Control Process

7. ACRONYMS

ANSI ATP CAGE CCB CCP CI CMO CS DoD	American National Standards Institute Authority to Proceed Commercial and Government Entity Configuration Control Board Contract Change Proposal Configuration Item Configuration Management Office Control Segment Department of Defense
DOT	Department of Transportation
ECP	Engineering Change Proposal
GPS	Global Positioning System
ICA	Interface Control Agency
ICAP	Interface Control Action Plan
ICC	Interface Control Contractor
ICD	Interface Control Document
ICWG	Interface Control Working Group
IRC	Interface Responsible Contractor
IRO	Interface Responsible Organization
IRN	Interface Revision Notice
IS	Interface Specification
ISO	International Organization for Standardization
JPO	Joint Program Office
LOE	Letter of Exception
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
OPR	Office of Primary Responsibility
PIRN	Proposed Interface Revision Notice
POC	Point of Contact
RFC	Request for Change
SMC	Space and Missile Systems Center
SPD	System Program Director
SPI	Single Process Initiative
SS	Space Segment
TCP	Task Change Proposal
US	User Segment

ATTACHMENT 1 DOCUMENTATION AND OTHER GUIDELINES

A1.1 PREPARATION OF GPS ICDs. This Section provides format and content guidelines to be considered in preparation of GPS ICDs.

A1.1.1 Document Titles. The title should be a concise description of the interface(s) or function(s) involved.

A1.1.2 Document Numbers. All ICD numbers shall be preceded by the acronym "ICD"/"IS." The GPS JPO Configuration Management Office assigns the ICD number.

A1.1.3 Title and Revision Block Format. The title and revision block page for GPS ICDs should be as illustrated in Figure A1-1.

A1.1.4 Technical Format and Content. ICDs are written in accordance with the guidance outlined in MIL-STD-961. Specifically as defined in the following paragraphs:

A1.1.4.1 Page Numbers. All pages are numbered consecutively with Arabic numbers at the bottom center of each page.

A1.1.4.2 Figure and Table Numbers. Figures are to be numbered with single Arabic number; Tables numbered with Roman numerals; Tables or Figures to appear immediately after their reference in paragraph or compiled at end of ICD.

A1.1.4.3 Commercial and Government Entity (CAGE) Code. Preparing activity CAGE Code shall appear on the cover page.

A1.1.5 Drawing Format. Where drawings are needed, either American National Standards Institute (ANSI), International Organization for Standardization (ISO), or Single Process Initiative (SPI) contractor drawing standards are acceptable as long as the information needed to ensure operability and compatibility of the interface is provided in understandable and usable form.

A1.1.6 ICD Key Participants. A section can be provided in an ICD that reflects the key organizations involved in the preparation, review, and approval of the ICD.

FOR OFFICIAL USE ONLY (or appropriate classification marking) (SAMPLE)

REVISIONS								
DESCRIP	DATE							
ICD-GPS-XXX, Initial Release	ICD-GPS-XXX, Initial Release Date of is							
Revision Release		Date of is	sue					
 DISTRIBUTION D - Distribution authorized to DoD and US DoD contractors only (Reason: ADMINISTRATIVE OR OPERATIONAL USE) (Date Of Determination: [date]). Other requests for this document shall be referred to Navstar Global Positioning System Joint Program Office (SMC/GP). WARNING - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. 2751, et seq.) or Executive Order 12470. Violation of these export-control laws is subject to severe criminal penalties. Dissemination of this document is controlled under DoD Directive 5230.25 and AFI 61-204. DESTRUCTION NOTICE - For classified documents, follow the procedures in DoD 5220.22-M, <i>Industrial Security Manual</i>, section 11-19, or DoD 5200.1-R, <i>Information Security Program Regulation</i>, chapter IX. For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document. 								
	APPROVALS							
AUTHORIZED SIGNATURES	REPRESENTING		DATE					
* An asterisk affixed to the approval signature Exception" contained in Appendix I of this do		xceptions tal	ken in the "Letter of					
INT	TERFACE CONTROL DOCUM	ENT						
ICC NAME AND ADDRESS								
ICD TITLE								
REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TO	THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TOCAGE CODEDOCUMENT NO.ICD-GPS-XXXX							
ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED. REV: SHEET i								

A1.2 REVISION NOTICES. Figure A1-2 provides example PIRN approval sheet and Figure A1-3 provides example IRN cover page.

A1.3. ICWG ACTION ITEMS/PLANS. ICWGs will establish ground rules for handling ICWG action items. The following ground rules are provided as a guide:

a. Any ICWG member may originate an ICWG action item to be considered and finalized by the ICWG chairperson.

b. The ICWG will document interface problems that require some type of ICWG action. Each ICC/ICA may develop their own documentation method for use in their respective ICWG.

c. The originator of a particular action item will record the following: originator information and problem information if known. The problem description should include supporting data, e.g. related problem impacts, subsystems and associated interfaces that will/may be affected, and level of urgency.

d. In coordination with the JPO, the ICC/ICA will provide government POC information for each action item and will identify those responsible for problem resolution.

e. In coordination with those responsible for problem resolution, the ICC/ICA will define a plan of action and provide/update the required plan and schedule information in the ICAP.

f. The ICWG chairperson and co-chairperson, if applicable, will determine and provide the disposition information.

g. The ICC will ensure that the date is kept current as additional information is updated on the form.

h. The action organization(s) will report status in accordance with the plan of action.

i. The action item will be closed once the problem is resolved, and after the resolution is documented, reviewed and approved by the ICWG co-chairpersons. All parties involved will be notified when the action item is finally closed.

j. In the event that an action item cannot be resolved by the ICWG, the problem will be forwarded to the GPS JPO for resolution.

k. The ICC/ICA will be responsible for maintaining up-to-date files and documentation of all ICWG activities. The ICC/ICA will receive, record, and update action items, coordinate appropriate action(s), produce status reports, and distribute copies of such reports to all ICWG members.

A1.3.1 ICAP. In coordination with the GPS JPO, the ICC/ICA is responsible for maintaining a consolidated schedule of all planned ICD action, including PIRNS, IRNs, revisions and ICWG meetings.

a. An example ICAP is shown in Figure A1-4. Each ICC/ICA may develop their own documentation method for use in their respective ICWG.

b. ICAPs should be reviewed quarterly and updated as needed.

AFFECTED ICD	THIS PIRN					
NO. ICD-GPS-xxx	ORIGINATED BY: ICC/ICA Name	NO. PIRN-XXX-YYY				
REV: X	ORIG. DATE:	SHEET 1 OF				
TITLE:	REV DATE:					
(U) ICD Title OPERATIONAL ICD TYPE: (I, II, or III)	DISPOSITION APPROVED: RELEASED AS REVISED ICD WITHDRAWN DISAPPROVED (FOR REASON REFER TO) OTHER:					
REASON FOR CHANGE:						
DESCRIPTION OF CHANGE:						
APPROVED:	YES NO	YES NO				
With Comments	With Exc	ceptions				
Name of Approving Organization	Authorized Signature	Date				
Distribution authorized to U.S. Government agencies and their contractors for administrative and operational use. Other requests for this document shall be referred to Navstar GPS Joint Program Office (SMC/GP). <u>DESTRUCTION NOTICE</u> - For classified documents, follow the procedures in DoD 5220.22-M, <i>National Industrial Security</i> <i>Program Operating Manual</i> (NISPOM), chapter 5, section 7; or DoD 5200.1-R, <i>Information Security Program Regulation</i> , chapter IX. For unclassified, Limited Documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.						
PROPOSED INTERFACE REVISION NOTICE						
THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS ANDICC Name and AddressNOTHING HEREIN CONTAINED SHALL BE DEEMED TO ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED.ICC Name and Address						
	CAGE Code					

Figure A1-2 SAMPLE PIRN Approval Sheet

AFFECTED ICD	THIS IRN					
NO.	ORIGINATED BY:		1	NO.		
ICD-GPS-xxx	ICC/ICA Name			RN-XXXX-YYY		
REV: X	ORIG. DATE	REV DATE	E (\$	SHEET 1 OF		
TITLE:	THIS IRN INCOR APPROVED IN 1			HANGES PROPOSED AND PIRN(S):		
(U) ICD Title	PIRN-XXXX-					
OPERATIONAL ICD TYPE: (I, II, or III)						
IRN RELEASE AUTHORIZE	D BY:					
		ion Control B PS Joint Proເ		Chairperson Office		
	Date			_		
DESCRIPTION:	DESCRIPTION:					
	INTERFACE REVISION NOTICE (IRN) DISTRIBUTION STATEMENT A					
APPROVED FO		-		ON IS UNLIMITED		
THIS DOCUMENT SPECI REQUIREMENTS AND NO CONTAINED SHALL BE D TERMS OF ANY CONTRA	OTHING HEREIN DEEMED TO ALTER THE ACT OR PURCHASE					
ORDER BETWEEN ALL PARTIES AFFECTED.			CAG	E Code		

Figure A1-3 SAMPLE IRN Cover Sheet

	DOCUMENT INFO						
Doc. No.							
Doc. Title							
INTERFACE CONTR	ROL CONTRA	CTOR/AGENO	CY (ICC/ICA) INFO				
Name	Phone		Email				
Organization	Address						
	TION AND SCI	HEDULE INF	0				
Action Description:							
Action Plan:							
	Action Schedule:						
	POC II						
Project Officer Name/Phone		Action POC N	ame/Phone				
Project Officer Organization	Action POC O	ction POC Organization					
Project Officer Email Action POC Email							
	STAT	US					
Actions On Schedule Schedule Delayed by 		Comments:					

Figure A1-4 Sample ICAP Format

BACK COVER

GP-03-001A 20 April 2006