	CHANGE NOT	ICE	
Affected Document:	IRN/SCN Number		Date:
ICD-GPS-870 Rev C	IRN-ICD-870C-001		05-APR-2019
Authority: REC-00374			Date: 28-SEP-2018
CLASSIFIED BY: N/A			20 021 2010
DECLASSIFY ON: N/A			
Document Title: NAVSTAR N	lext Generation GPS Opera	tional Control Segmen	t (OCX) to User
Support Community Interface			
RFC Title: 2018 Proposed Cha	anges to the Public Docume	ents	
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Authored By: Philip Kwan	Che	cked By: Jennifer Lemus	
	REPRESE		DATE
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	Department of Homelar United States Coast Navigation Cente	id Security (DHS), Guard (USCG), r (NAVCEN)	•
	Department of Trans	portation (DOT)	
	Federal Aviation Adm	inistration (FAA)	
	HQ Air Force Space	ce Command	
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		CODE IDE	ENT 66RP1

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RFC-00374	ICD870C_RFC374		28-SEP-2018
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documents.			
Authored By: Philip Kwan	Cheo	ked By: Jennifer Lemus	
AUTHORIZED SIGNATURES	REPRESEN	TING	DATE
	GPS Direct	orate	
	Space & Missile Systems Ce	enter (SMC) – LAAFB	
Digitally signed by	Department of Homelan	d Security (DHS),	
GLANDER.MICHAEL.W GLANDER.MICHAEL.WILLIAM.10	United States Coast Guard (USCG),		
ILLIAM.1015659102 15659102 Date: 2019.04.22 11:43:29 -04'00'	Navigation Center (NAVCEN)		
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Authored By: Philip Kwan Checked By: Jennifer Lemus			
AUTHORIZED SIGNATURES	REPRESEN	ITING	DATE
	GPS Direct	orate	
	Space & Missile Systems C	enter (SMC) – LAAFB	·
	Department of Homelar	d Security (DHS),	
	United States Coast		
NGUYEN.HA.A.139824 Digitally signed by NGUYEN.HA.A.1398246043 Date: 2019.04 11.09-23:42 -07'00'	Eederal Aviation Adm	inistration (EAA)	
		command	
	(AFSPC/50	OG)	
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		5. CA 90245	
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AUTHORIZED SIGNATURES	REPRESE	NTING	DATE
	GPS Direct Space & Missile Systems C	torate	
	Department of Homela	nd Security (DHS)	
	United States Coast	Guard (USCG),	
	Navigation Cente	r (NAVCEN)	
	Department of Trans	portation (DOT)	
	Federal Aviation Adm	inistration (FAA)	
Adam Edwards	HQ Air Force Spa (AFSPC/50	ce Command) OG)	11 April 2019
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		CODE IDE	ENT 66RP1

Operational Advisories Proposed Changes

10.1.0-1

WAS :

NANUs are used to notify Users of scheduled and unscheduled satellite outages and general GPS information. An outage is defined to be a period of time that the satellite is removed from service and not available for use. Operators determine the satellite meets the conditions for "unhealthy" provided in Section 2.3.2 of the Standard Positioning Service Performance guide. The paragraphs that follow describe the different types of NANUs. The NANU descriptions are arranged into four groups, as follows:

- Scheduled outages
- Unscheduled outages
- General text message
- Others

Redlines :

NANUs are used to notify Users of scheduled and unscheduled satellite outages and general GPS information. An outage is defined to be a period of time that the satellite is removed from service and not available for use. Operators determine the satellite meets the conditions for "unhealthy" provided in Section 2.3.2 of the Standard Positioning Service Performance guide. The paragraphs that follow describe the different types of NANUs. The NANU descriptions are arranged into four groups, as follows:

- · Scheduled outages
- Unscheduled outages
- General text message
- · Others

Users are advised that the Point of Contact (POC) information contained in the NANU samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The first NANU example, Figure 10-1, includes POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent NANUs for up-to-date information.

IS :

NANUs are used to notify Users of scheduled and unscheduled satellite outages and general GPS information. An outage is defined to be a period of time that the satellite is removed from service and not available for use. Operators determine the satellite meets the conditions for "unhealthy" provided in Section 2.3.2 of the Standard Positioning Service Performance guide. The paragraphs that follow describe the different types of NANUs. The NANU descriptions are arranged into four groups, as follows:

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- Unscheduled outages
- General text message

• Others

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ICD870-94 :

Section Number :

10.1.1.0-5

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM NANU TYPE: FCSTDV 1. NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: N/A REF NANU DTG: N/A SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ 2 (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS: //WWW. NAVCEN. USCG. GOV, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, CIVIL AVIATION - FAA Sateriffe operations does the set operation of the set operation of the set operation <u>GPS_SUPPORT@SCHRIEVER.AF. MIL, HTTP: //WWW.SCHRIEVER.AF. MIL/GPS,</u> MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG. AF. MIL

Figure 10-1 FCSTDV NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM
1. NANU TYPE: FCSTDV
NANU NUMBER: YYYYSSS
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NAMI: N/A
REF NANII DTG- N/A
SVN. AAA DDN. VV
FRN, AA CTADT IDAV. III
START 11 ME ZULU: HHMMI
STARI CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJJ
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: <u>CIVIL NON AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>,</u>
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: <u>CIVIL NON AVIATION - NAVCEN at 703-313-5900</u>, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, <u>CIVIL AVIATION - FAA. Satellite Operations Group at 540-422-4178</u>,
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: <u>CIVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCG.COV,</u> <u>CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178,</u> <u>https://www.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>WILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>MILTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>GINTPN/WWW.faa.gov/air_traffic/nas/gps_reports/,</u> <u>GINTPN/WWW.faa.gov/air_traffic/nas/gps_r</u></u>
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 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON AVIATION – NAVCEN at 703–313–5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION – FAA Satellite Operations Group at 540–422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY – GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u>, DSN 560–2541, COMM 719–567–2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS0</u>, MILITARY ALTERNATE – JOINT SPACE OPERATIONS CENTER, DSN 276–9994, COMM 805–606–9994, JSPOCCOMBATOPS@VANDENBERC_AF_MIL
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON AVIATION NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u>, DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS</u>, MILITARY_ALTERNATE JOINT_SPACE OPERATIONS_CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDEDBERG.AF.MIL</u> CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW NAVCEN_USCG_GOV
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV,</u> CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/,</u> MLITARY GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MLL/GPS0C, DSN 560-2541, COMM 719-567-2493, GPS_UPPORT@SCHRIEVER.AF.MLL, HTTP://WWW.SCHRIEVER.AF.MLL/GPS, MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MLL CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV, CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS_REPORTS/.</u>
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON AVIATION NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.COV</u>, CIVIL AVIATION FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u>, DSN 560-2541, COMM 719-567-2493, GPS_SUPPORT@SCHRIEVER.AF.MIL, <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS0</u>, MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL CIVIL NON-AVIATION – NAVCEN AT 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL NON-AVIATION – NAASEO AT 540-422-4178, <u>HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS_REPORTS/</u>, MILITARY – GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPS0C/, DSN 560-2541, COMM 719-567-2493,
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCC.GOV,</u> CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MLITARYGPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u>, DSN 560 2541, COMM 719 567 2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u>, <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS</u>, MILITARYJOINT_SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u> CIVIL NON-AVIATION - NAVCEN AT 703 - 313 - 5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA NASEO AT 540 - 422 - 4178, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, MILITARY - GPS OPERATIONS CENTER AT HTTPS://WWW.FAA.COV/AIR_TRAFFIC/NAS/GPS_REPORTS/, MILITARY - GPS OPERATIONS CENTER AT HTTPS://WWW.SCHRIEVER.AF.MIL/GPS0C/, DSN 560 - 2541, COMM 719 - 567 - 2493, GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS0C/, DSN 560 - 2541, COMM 719 - 567 - 2493, GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS0C/, DSN 560 - 2541, COMM 719 - 567 - 2493, GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS0C/,
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. POC: CIVIL NON AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV,</u> CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/,</u> MILITARY - CPS Operations Center at <u>HTTPS://CPS.AFSPC.AF.MIL/CPS0C, DSN 560-2541, COMM 719-567-2493, GPS_SUPPORT@SCHRIEVER.AF.MIL, <u>HTTP://WWW.SCHRIEVER.AF.MIL/CPS5,</u> MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u> CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV,</u> CIVIL AVIATION - FAA NASEO AT 540-422-4178, <u>HTTPS://WWW.NAVCEN.USCG.GOV,</u> CIVIL AVIATION - FAA NASEO AT 540-422-4178, <u>HTTPS://WWW.FAA.GOV/AIR_TRAFFIC/NAS/GPS_REPORTS/,</u> MILITARY - CPS OPERATIONS CENTER AT HTTPS://GFS.AFSPC.AF.MIL/CPS0_, MILITARY - CPS OPERATIONS CENTER AT HTTPS://GRS.AFSPC.AF.MIL/CPS0_, MILITARY - CPS OPERATIONS CENTER AT HTTPS://GRS.AFSPC.AF.MIL/CPS0_, MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,</u>

Figure 10-1 FCSTDV NANU Message Template

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ſ	NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE IDAY 111/HHMM - IDAY 111/HHMM
l	1. NANU TYPE: FCSTDV
l	NANU NUMBER: YYYYSSS
l	NANU DTG: DDHHMMZ MMM YYYY
l	REFERENCE NANU: N/A
l	REF NANU DTG: N/A
l	SVN: XXX
l	PRN: XX
l	START JDAY: JJJ
l	START TIME ZULU: HHMM
l	STARI CALENDAR DATE: DD MMM YYYY
l	STOP JDAT: JJJ GTOD TI ME ZIH II. HIINM
l	STOP IT ME ZULU: MINIM STOD CALENDAD DATE: DD MAALVVVV
l	SIOI CALEMDAR DATE. DD MMM 1111
l	2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY ILL
l	(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JLJ (DD MMM YYYY) ENDING HHMM ZULU.
l	
l	3. POC: CIVIL NON-AVIATION – NAVCEN AT 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u> ,
l	CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS_REPORTS/,
l	MILIIARY - GPS UPERAITUNS CENTER AI HITPS://GPS.AFSPC.AF.MIL/GPSUC/, DSN 560-2541, CUMM /19-567- 2403 CPSOPERATIONSCENTER@US AF MIL
l	MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COM 805-605-3522.
I	JSPOCCOMBATOPS@VANDENBERG. AF. MIL

Figure 10-1 FCSTDV NANU Message Template

10.1.1.0-7

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM
1. NANU TYPE: FCSTMX
NANU NUMBER: YYYYSSS
NANU DTG: DDHHMZ MMM YYY
REFERENCE NANU: N/A
REFE NANU DTG: N/A
SVN: XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
STOP TIME ZULU: HHMM
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ
(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY)
ENDING HHMM ZULU.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV.</u>
(CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/.
MILITARY - GPS Operations Center at HTTPS: //WW.SCHRIEVER.AF. MIL/CPS.
MILITARY - GPS Operations Center at HTTPS: //WW.SCHRIEVER.AF. MIL/CPS.
MILITARY ALTERRNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF. MIL

Figure 10-2 FCSTMX NANU Message Template

Redlines :

 NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS

 SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM

 1. NANU TYPE: FCSTMX

 NANU NUMBER: YYYYSSS

 NANU DTG: DDHHMMZ MMM YYY

 REFERENCE NANU: N/A

 REFERENCE NANU: N/A

 REFERENCE NANU: N/A

 START TIME ZULU: HHMM

 START TIME ZULU: HHMM

 START TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP CALENDAR DATE: DD MMM YYYY

 STOP CALENDAR DATE: DD MMM YYYY
 </tr

Figure 10-2 FCSTMX NANU Message Template

 NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS

 SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM

 1.
 NANU TYPE: FCSTMX

 NANU NUMBER: YYYYSSS

 NANU DTG: DDHHMMZ MMM YYYY

 REFERENCE NANU: N/A

 REF NANU DTG: N/A

 SVN: XXX

 PRN: XX

 START JDAY: JJJ

 START TIME ZULU: HHMM

 START CALENDAR DATE: DD MMM YYYY

 STOP JDAY: JJJ

 STOP TIME ZULU: HHMM

 STOP CALENDAR DATE: DD MMM YYYY

 <tr

Figure 10-2 FCSTMX NANU Message Template

ICD870-98:

IS :

Section Number :

10.1.1.0-9

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE EXTENDED UNTIL FURTHER NOTICE 1. NANU TYPE: FCSTEXTD NANU DTG: CDDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: UFN STOP TIME ZULU: N/A STOP CALENDAR DATE: N/A
2. CONDITION: THE FORECAST OUTAGE FOR GPS SATELLITE SVNXXX (PRNXX) IS EXTENDED UNTIL FURTHER NOTICE.
 BOC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY - GPS Operations Center at <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC</u>, DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP: //WWW.SCHRIEVER.AF.MIL/GPS</u>, MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u>

Figure 10-3 FCSTEXTD NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE EXTENDED UNTIL FURTHER NOTICE
NANU TYPE: FCSTEXTD NANU NUMBER: YYYSSS MANU DTG: DDHHMMZ MM YYY REFERENCE NANU: YYYNNN REF NANU DTG: DDHHMMZ MM YYY SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYY STOP JDAY: UFN STOP TIME ZULU: N/A STOP CALENDAR DATE: N/A
CONDITION: THE FORECAST OUTAGE FOR CPS SATELLITE SVNXXX (PRNXX) IS EXTENDED UNTIL FURTHER NOTICE.
POC: CIVIL NON AVIATION NAVCEN at 703 313 5000. <u>HTTPS://WWW.NAVCEN.USCC.GOV.</u> CIVIL.AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>. MILITARY _CPS_Operations Center at <u>HTTPS://CPS.AFSBC.AF.MIL/CPSSC</u>. DSN 560 2541, COMM 710 567 2403, <u>CPS_SUPPORTSCURIEVER.AF.MIL. HTTP://WWW.SCURIEVER.AF.MIL/CPSSC</u>. MILITARY _CIFS_OPERATIONS_CENTER_DSN 276 9094, COMM 805 606 9094, <u>JSPOCCOMEATOPSEVANDENBERC.AF.MIL</u> See Figure 10-1 for POC format

Figure 10-3 FCSTEXTD NANU Message Template

IS :

_		
	NOT SUB 1.	TI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS BJ: SVNXXX (PRNXX) FORECAST OUTAGE EXTENDED UNTIL FURTHER NOTICE NANU TYPE: FCSTEXTD NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: UFN STOP TIME ZULU: N/A STOP TIME ZULU: N/A
	2.	CONDITION: THE FORECAST OUTAGE FOR GPS SATELLITE SVNXXX (PRNXX) IS EXTENDED UNTIL FURTHER NOTICE.
	3.	See Figure 10-1 for POC format

Figure 10-3 FCSTEXTD NANU Message Template

10.1.1.0-11

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE SUMMARY JDAY JJJ/HHMM - JDAY JJJ/HHMM 1 NANIL TVPE- ECSTSILMM
NANU NUMBER: YYYYSSS
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: YYYYNNN
REF NANU DIG: DDHHMMZ MMM YYYY SIML VYY
DINI AAA DINI YY
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
STOP LITME ZULU: HHIMM STOP CALENDAR DATE: DD MMM YYYY
STOL CALLADAR DATE. DD MMM 1111
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ
(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY)
ENDING HHMM ZULU.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900. HTTPS://WWW.NAVCEN.USCG.GOV.
CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178,
https://www.faa.gov/air_traffic/nas/gps_reports/,
MILITARY - GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u> , JSN 560-2541, COMM 719-567-2493, CPS SUPPOPERCUPTEVIEW AF MIL/GPS
<u>UT3 SUPPORTESCRATEVER, AF.ML., http://www.scratever.ar.ml/ges</u>
JSPOCCOMBATOPS@VANDENBERG. AF. ML

Figure 10-4 FCSTSUMM NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE SUMMARY JDAY JJJ/HHMM - JDAY JJJ/HHMM 1. NANU TYPE: FCSTSUMM NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
3. POC: CLVIL NON AVIATION NAVCEN at 703 313 5000, <u>HTTPS://WWW.NAVCEN.USCC.GOV</u> , CLVIL AVIATION FAA Satellite Operations Croup at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> , <u>MLLTARY CPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MLL/GPSOC</u>, DSN 560 2541, COMM 719 567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MLL, HTTP://WWW.SCHRIEVER.AF.MLL/GPS.</u> <u>MLLTARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERC.AF.MLL</u> <u>See Figure 10-1 for POC format</u></u></u>



NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE SUMMARY JDAY JJJ/HHMM - JDAY JJJ/HHMM
NANU TYPE: FCSTSUMM NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX
START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY
CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
See Figure 10-1 for POC format

Figure 10-4 FCSTSUMM NANU Message Template

ICD870-102 :

Section Number :

10.1.1.0-13

WAS :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE CANCELLED 1. NANU TYPE: FCSTCANC NANU NUMBER: YYYYSSS NANU DTG: DDHHMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMZ MMM YYYY SVN: XXX PRN: XX START JDAY: JJJ START TI ME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: CANCELLED STOP TI ME ZULU: N/A STOP CALENDAR DATE: N/A
2. CONDITION: THE FORECAST OUTAGE FOR GPS SATELLITE SVNXXX (PRNXX) SCHEDULED FOR JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU HAS BEEN CANCELLED.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u> , CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> , MILITARY - CPS Operations Center at <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC</u> , DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u> , <u>HTTP: //WWW.SCHRIEVER.AF.MIL/GPS</u> , MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG_AF_MIL

Figure 10-5 FCSTCANC NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE CANCELLED
1. NANU TYPE: FCSTCANC
NANU NUMBER: YYYYSSS
NANU DIG: DDHHMMZ MWM YYYY
REFERENCE NANU: YYYYNN
REF NANU DTG: DDHHMMZ MMM YYYY
SVN: XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: CANCELLED
STOP TIME ZULU: N/A
STOP CALENDAR DATE: N/A
2 CONDITION. THE EADECAST AUTACE FOD CDS SATELLITE SUNVEY (DDAVY) SCHEDULED FOD
2. CONDITION, THE FORECAST OUTAGE FOR GES SATELLITE SYNAAA (FRMAA) SCHEDULED FOR IDAV III (DD MAM VVVV) DECINNINC HUMM ZHI HAS DEEN CANCELLED
JDAI JJJ (DD MMMM 1111) DEGI MMI NG HIMMM ZULU HAS BEEN CANCELLED.
3. POC: CIVIL NON AVIATION NAVCEN at 703 313 5000, HTTPS: //WWW. NAVCEN, USCG, COV,
CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178.
https://www.faa.gov/air traffic/nas/gps reports/.
MILTARY CPS Operations Center at <u>HTTPS://CPS.AFSPC.AF.MLL/CPSOC</u> , DSN 560 2541, COMM 719 567 2493,
<u> CPS_SUPPORT@SCHRÌ EVER. AF. MI L, HTTP: //WWW. SCHRI EVER. AF. MI L/GPS,</u>
MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994,
JSPOCCOMBATOPS@VANDENBERG. AF. MIL
See Figure 10-1 for POC format

Figure 10-5 FCSTCANC NANU Message Template

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE CANCELLED
1. NANU TYPE: FCSTCANC NANU DTG: CDDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: CANCELLED STOP TIME ZULU: N/A STOP CALENDAR DATE: N/A
2. CONDITION: THE FORECAST OUTAGE FOR GPS SATELLITE SVNXXX (PRNXX) SCHEDULED FOR JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU HAS BEEN CANCELLED.
3. See Figure 10-1 for POC format

Figure 10-5 FCSTCANC NANU Message Template

ICD870-104 :

Section Number :

10.1.1.0-15

WAS :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE RESCHEDULED
1. NANU TYPE: FCSTRESCD
NANU NUMBER: YYYSSS NANU DC, DDUIDAZ MAA VXVV
NANU DIG: DDHHMMZ MMM YYY Decedence Nanu. Vyvvnni
REFERENCE NANU; IIIINNN REF NANU DTC: DDHHMAZ MAM VVVV
SVN- XXX
PRN XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZUU U UNTIL IDAY JIL (DD MMM YYYY)
ENDING HHMM ZULU. PLEASE REFERENCE NANU NUMBER YYYNNN
DTG DDHHMMZ MMM YYYY FOR THE ORIGINAL OUTAGE TIME.
3. POC: CLVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u> ,
CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178,
<u>nttps://www.faa.gov/air_traffic/has/gps_reports/</u>
MILLIARI - GrS Uperations center at $\frac{11175}{7}$ ($\frac{75}{7}$, $\frac{375}{7}$, 375
MULTARY ALTERNATE - TOLDE SPACE OPERATIONS CENTER DSN 276-9994 COMM 805-606-9994
JSPOCCOMBATOPS@VANDENBERG. AF. MIL

Figure 10-6 FCSTRESC NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE RESCHEDULED
1. NANU IYPE: FCSIRESCD
NANU NUMBER: ITITSSS
NANU DIG: DDHIIMWZ MWWI IIII DEFEDENCE NANII- VYVVNIN
REFERENCE NAME. IIIINN REF NAME TO COMPANY MAN VVVV
SVN XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY
2 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON IDAY III
(DD MMM YYYY) BEGINING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY)
ÈNDING HHMM ZULU. PLEASE REFERENCE NANU NUMBER YYYYNN
DTG DDHHMMZ MMM YYYY FOR THE ORIGINAL OUTAGE TIME.
3. POC: <u>CLVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>,</u>
CIVIL AVIAILON - FAA Satellite Operations Group at 540-422 4178,
ALLDS:///WWW.faa.gov/alf_traffic/ABS/<u>EDS_FEDOFES/</u> MILITADYCDS_Openations_Content_ALTERS.//CDS_AESDC_AE_MIL/CDSOCDSN_560_9541COMM_710_567_2402
The first were operations center at <u>first vers</u> and the set of th
MILITARY ALTERNATE IN MILE SPACE OPERATIONS CENTER DSN 276 9004 COMM 805 606 9094
ISPOCCOMPATIONS@VANDENBERC AF MI
See Figure 10-1 for POC format

Figure 10-6 FCSTRESC NANU Message Template

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE RESCHEDULED 1. NANU TYPE: FCSTRESCD NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX START JDAY: JJJ START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TI ME ZULU: HHMM STOP TI ME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY	
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. PLEASE REFERENCE NANU NUMBER YYYYNNN DTG DDHHMMZ MMM YYYY FOR THE ORIGINAL OUTAGE TIME.	
3. See Figure 10-1 for POC format	

Figure 10-6 FCSTRESC NANU Message Template

10.1.1.0-17

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM – UNTIL FURTHER NOTICE 1. NANU TYPE: FCSTUUFN NANU NUMBER: YYYSSS NANU DTC: DDHHMMZ MMM YYYY REFERENCE NANU: N/A REF NANU DTC: N/A SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: UFN STOP TIME ZULU: N/A STOP TIME ZULU: N/A STOP TIME ZULU: N/A STOP TIME ZULU: N/A STOP CALENDAR DATE: N/A 2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE NO EARLIER THAN JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL FURTHER NOTICE. 3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/, MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSoC, DSN 560-2541, COMM 719-567-2493, GPS SUPPORT#SCRIFIEVER.AF.MIL, HTTP://WWW.SCRIFIEVER.AF.MIL/GPS.

Figure 10-7 FCSTUUFN NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM – UNTIL FURTHER NOTICE
1. NANU TYPE: FCSTUUFN NANU NUMPED, VVVVSSS
NANU NUMBER: 1111555 NANU DTC: DDHIMMZ MMM VVVV
REFERENCE NAUL N/A
REF NANU DTG: N/A
SVN: XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JJAT: UPN STOP TIME 711111, N/A
STOP THE ZOLO. N/A
Divi Chelinin Dire. N/I
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE NO EARLIER THAN JDAY JJJ
(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL FURTHER NOTICE.
3. PUC: CIVIL NUM AVIATION NAVER AL /03 313 3900, <u>HITPS://WWW.NAVER.USCC.GUV</u> , CIVIL AVIATION EAA Satallita Onanationa Crown at 540 492 4179
the submit of the state of the
MILLTARY CPS Operations Center at 117PS: //CPS AFSPC AF MIL/CPS0C DSN 560 2541 COMM 719 567 2493
CPS SUPPORT@SCHRIEVER. AF. M.L. HTTP: //WWW.SCHRIEVER. AF. M.L/CPS.
MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9094, COMM 805 606 9994,
JSPOCCOMBATOPS@VANDENBERC. AF. ML
<u>See Figure 10-1 for POC format</u>

Figure 10-7 FCSTUUFN NANU Message Template

 NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS

 SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM – UNTIL FURTHER NOTICE

 1.
 NANU TYPE: FCSTUUFN

 NANU NUMBER: YYYYSSS

 NANU DTG: DDHHMMZ MMM YYYY

 REFERENCE NANU: N/A

 REFF NANU DTG: N/A

 SVN: XXX

 PRN: XX

 START JDAY: JJJ

 START TI ME ZULU: HHMM

 START CALENDAR DATE: DD MMM YYYY

 STOP TI ME ZULU: N/A

 STOP TI ME ZULU: N/A

 STOP CALENDAR DATE: N/A

 2.
 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE NO EARLIER THAN JDAY JJJ

 (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL FURTHER NOTICE.

3. See Figure 10-1 for POC format

Figure 10-7 FCSTUUFN NANU Message Template

ICD870-113 :

Section Number :

10.1.2.0-5

WAS :

IS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - UNTIL FURTHER NOTICE 1. NANU TYPE: UNUSUFN NANU NUMBER: YYYYSSS
NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: N/A REF NANU DTG: N/A
SVN: XXX PRN: XX START IDAY: III
START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: UFN STOP TIME ZULU: N/A STOP TIME ZULU: N/A
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL FURTHER NOTICE.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u> , CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> , MILITARY - GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPSOC</u> , DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u> , <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS</u> ,
MILITARY ALTERNATE - JUINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG. AF. MIL

Figure 10-8 UNUSUFN NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - UNTIL FURTHER NOTICE
1. NANU TYPE: UNUSUFN
NANU NUMBER: YYYSSS
NANU DTG: DDHHMZ MMM YYY
REFERENCE NANU: N/A
REF NANU DTG: N/A
SVN: XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START TALEXDA DATE: DD MMM YYY
STOP TIME ZULU: N/A
STOP TIME ZULU: N/A
STOP CALENDAR DATE: DD MMM YYY
STOP CALENDAR DATE: N/A
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ
(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL FURTHER NOTICE.
3. POC: CIVIL NON AVIATION NAVEEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCC.COV.</u>
CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps.reports/</u>
MLITARY _CPS operations Center at <u>HTTPS://CPS.AFSPC.AF.MIL/CPS0</u>. DSN 560 2541, COMM 710 567 2403, <u>CPS SUPPORTSCHRIEVER.AF.MIL/CPS5</u>.
MLITARY _ATTERNATE __JOINT SPACE OPERATIONS CENTER, DSN 276 9004, COMM 805 606 9094, <u>JSPOCCOMBATOPSeVANDENBERC, AF.MIL</u>

Figure 10-8 UNUSUFN NANU Message Template

IS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - UNTIL FURTHER NOTICE
1. NANU TYPE: UNUSUFN
NANU NUMBER: YYYYSSS
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: N/A
REF NANU DTG: N/A
SVN: XXX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: UFN
STOP TIME ZULU: N/A
STOP CALENDAR DATE: N/A
a condition, or catellite cunway (drive) will be invicable on day 11
2. CUNDITION: GPS SATELLITE SVNAXA (PRNAX) WILL BE UNUSABLE ON JDAY JJJ
(DD MMM YYY) BEGINNING HHMM ZULU UNIIL FURTHER NUIICE.

3. See Figure 10-1 for POC format

Figure 10-8 UNUSUFN NANU Message Template

10.1.2.0-7

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - JDAY JJJ/HHMM
1. NANU TYPE: UNUSABLE
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: YYYNNN
REFERENCE NANU: YYYNNN
REFERENCE NANU: JJJ
START JDAY: JJJ
START JDAY: JJJ
START TIME ZULU: HHMM
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY
ENDING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYY)
ENDING HHMM ZULU.
POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS: //WWW. NAVCEN. USCG. GOV,
CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178,
https://www.faa.gov/air traffic/nas/gps.reports/.
MILITARY - GPS Operations Center at HTTPS: //GPS.AFSPC.AF. MIL/GPS0, DSN 560-2541, COMM 719-567-2493,
GPS SUPPORTESCHRIEVER.AF. MIL, HTTP: //WWW. SCHRIEVER.AF. MIL/GPS,
MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994,
JSPOCCOMBATOPS@VANDENBERG.AF. MIL

Figure 10-9 UNUSABLE NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - JDAY JJJ/HHMM 1. NANU TYPE: UNUSABLE NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNN DEE NANU DTG: DDHHMZ MMM YNYY
SVN: XXX PRN: XXX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
3. POC: CIVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCC.GOV</u> , CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffie/nas/gps_reports/</u> , MLLITARY CPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.ML/CPSOC</u> , DSN 560 2541, COMM 719 567 2403, <u>GPS_SUPPORT@SCHRIEVER.AF.MLL, HTTP://WWW.SCHRIEVER.AF.MLL/GPS</u> , MLLITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MLL</u> <u>See Figure 10-1 for POC format</u>

Figure 10-9 UNUSABLE NANU Message Template

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - JDAY JJJ/HHMM
1. NANU TYPE: UNUSABLE
NANU NUMBER: YYYYSSS
NANU NUMBER: YYYYSSS
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: YYYYNNN
REF NANU DTG: DDHHMMZ MMM YYYY
SVN: XXX
PRN: XX
START JDAY: JJJ
START TI ME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY

2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY)
3. See Figure 10-1 for POC format

Figure 10-9 UNUSABLE NANU Message Template

ICD870-117 :

Section Number :

10.1.2.0-9

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - JDAY JJJ/HHMM 1. NANU NUMBER: YYYSSS NANU DTG: DUHHMZ MMM YYY REFERENCE NANU: N/A REFE NANU DTG: N/A SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY 2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY - GPS Operations Center at <u>HTTPS: //CPS, AFSPC. AF. MIL/GPSG</u>, DSN 560-2541, COMM 719-567-2493, GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP: //WWW.SCHRIEVER.AF. MIL/GPSG, MILITARY ATTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL



Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) UNUSABLE JDAY JJJ/HHMM - JDAY JJJ/HHMM 1. NANU TYPE: UNUNOREF NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: N/A REF NANU DTG: N/A SVN: XXX PRN: XX START JDAY: JJJ START TI ME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TI ME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU. 2. 3. POC: CIVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCC.GOV</u>, CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY CPS Operations Center at <u>HTTPS://CPS.AFSPC.AF.MIL/CPSOC</u>, DSN 560 2541, COMM 719 567 2493, <u>CPS_SUPPORT@SCHRIEVER.AF.MIL</u>, <u>HTTP://WWW.SCHRIEVER.AF.MIL/CPS</u>, MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERC.AF.MIL</u> See Figure 10-1 for POC format

Figure 10-10 UNUNOREF NANU Message Template

IS :

2

NOTI	CE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS • SVNYYY (DDNYY) INNISARIE TDAY III/HHMM TDAY III/HHMM
1.	NANU TYPE: UNUNOREF
	NANU NUMBER: YYYYSSS
	NANU DTG: DDHHMMZ MMM YYYY
	REFERENCE NANU: N/A
	REF NANU DTG: N/A
	SVN: XXX
	PKN: AA STADT INAV. III
	START JDAT: JJ START TIME 71111- HHMM
	START CALENDAR DATE: DD MMM YYYY
	STOP IDAY. III
	STOP TIME ZULU: HHMM
	STOP CALENDAR DATE: DD MMM YYYY
2.	CONDITION: GPS_SATELLITE_SVNXXX (PRNXX) WAS_UNUSABLE_ON_JDAY_JJJ
	(DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY)
	ENDING HHMM ZULU.
3	See Figure 10-1 for POC format
0.	See Figure 10 1 for 100 formate

Figure 10-10 UNUNOREF NANU Message Template

10.1.4.0-5

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) USABLE JDAY JJJ/HHMM 1. NANU TYPE: USABINIT NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: N/A REF NANU DTG: N/A SVN: XXX PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: N/A STOP TIME ZULU: N/A STOP CALENDAR DATE: N/A
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS USABLE AS OF JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u> , CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> , MILITARY - GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPSOC</u> , DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u> , <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS</u> , MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u>

Figure 10-12 USABINIT NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANI) YYYYSSS
SUBJ: SVNXXX (PRNXX) USABLE JDAY JJJ/HHMM
1. NANU TYPE: USABINIT
NANU NUMBER: YYYYSSS
NANU_DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: N/A
REF NANU DIG: N/A
SVN: XXX
PKN: XX CTADE IDAV. III
STARI JUAI. JJJ STADT TIME ZULI: HUMM
START THE ZOLO. MINW START CALENDAR DATE: DD MMM VVVV
STOP IDAV. N/A
STOP TIME ZULU: N/A
STOP CALENDAR DATE: N/A
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS USABLE AS OF JDAY JJJ
(DD MMM YYYY) BEGINNING HHMM ZULU.
2. DOG. CLULL NON AND ATTON NAVCEN 14 700 010 7000 HTTPS: / (HUH NAVCEN USCC CON
3. PUC: CIVIL AND AVIATION NAVEN AT (03 313 3900, <u>HITPS://WWW.NAVEN.USCG.GOV</u> ,
bttp://www.fac.gov/cir_traffic/pac/dos_roports/
MULTARY CPS (Depending on Control at TTTPS: //CPS AFSPC AF MIL/CPSOC DSN 560 2541 COMM 710 567 2402
CPS SUPPORT SCHEDE VER AF MIL HTTP: //WWW SCHEDEVER AF MIL/OPS
MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994.
JSPOCCOMBATOPS@VANDENBERG, AF, MIL
See Figure 10-1 for POC format

Figure 10-12 USABINIT NANU Message Template

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) USABLE JDAY LLL/HHMM	
1. NANU TYPE: USABINIT	
NANU NUMBER: YYYYSSS	
NANU DTG: DDHHMMZ MMM YYYY	
REFERENCE NANU: N/A	
REF NANU DTG: N/A	
SVN: XXX	
PRN: XX	
START JDAY: JJJ	
START TIME ZULU: HHMM	
START CALENDAR DATE: DD MMM YYYY	
STOP JDAY: N/A	
STOP CALENDAD DATE: N/A	
STOP CALENDAR DATE: N/A	
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS USABLE AS OF JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU.	
3. See Figure 10-1 for POC format	

Figure 10-12 USABINIT NANU Message Template

10.1.4.0-7

WAS :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: LEAP SECOND 1. CONDITION: THE INTERNATIONAL EARTH ROTATION SERVICE (IERS) HAS ANNOUNCED THE INTRODUCTION OF A LEAP SECOND TO OCCUR AT THE END OF MMM YYYY COORDINATED UNIVERSAL TIME (UTC) WILL SEQUENCE AS FOLLOWS: DD MMM YYYY DD MMM YYYY HH HOURS MM MINUTES SS SECONDS DD MMM YYYY HH HOURS MM MINUTES SS SECONDS 2. DD MMM YYYY HH HOURS MM MINUTES SS SECONDS FOR GPS, AS WITH PREVIOUS LEAP SECOND UPDATES, THE UTC DATA IN SUBFRAME 4, PAGE 18 OF THE NAVIGATION MESSAGE WILL CHANGE IN ACCORDANCE WITH IS-GPS-200. 3. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L2C WILL CHANGE IN ACCORDANCE WITH IS-GPS-200. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN SUBFRAME 3, PAGE 1 OF THE CNAV-2 DATA FOR L1C WILL CHANGE IN ACCORDANCE WITH IS-GPS-800. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L5 WILL CHANGE IN ACCORDANCE WITH IS-GPS-705. BEFORE THE LEAP SECOND GPS-UTC IS XX (GPS IS AHEAD OF UTC BY XX SECONDS) AFTER THE LEAP SECOND GPS-UTC WILL BE XX (GPS WILL BE AHEAD OF UTC BY XX SECONDS) POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS: //WWW. NAVCEN. USCG. GOV, 4. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MLLTARY - GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPSOC</u>, DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u>, <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS</u>, MLLTARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u>

Figure 10-13 LEAPSEC NANU Message Template

Redlines :

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: LEAP SECOND 1. CONDITION: THE INTERNATIONAL EARTH ROTATION SERVICE (IERS) HAS ANNOUNCED THE INTRODUCTION OF A LEAP SECOND TO OCCUR AT THE END OF MMM YYYY COORDINATED UNIVERSAL TIME (UTC) WILL SEQUENCE AS FOLLOWS: DD MMM YYYY DD MMM YYYY DD MMM YYYY HH HOURS MM MINUTES SS SECONDS HH HOURS MM MINUTES SS SECONDS 2. FOR GPS, AS WITH PREVIOUS LEAP SECOND UPDATES, THE UTC DATA IN SUBFRAME 4, PAGE 18 OF THE NAVIGATION MESSAGE WILL CHANGE IN ACCORDANCE WITH IS-GPS-200. 3. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L2C WILL CHANGE IN ACCORDANCE WITH IS-GPS-200. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN SUBFRAME 3, PAGE 1 OF THE CNAV-2 DATA FOR L1C WILL CHANGE IN ACCORDANCE WITH IS-GPS-800. FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L5 WILL CHANGE IN ACCORDANCE WITH IS-GPS-705. BEFORE THE LEAP SECOND GPS-UTC IS XX (GPS IS AHEAD OF UTC BY XX SECONDS) AFTER THE LEAP SECOND GPS-UTC WILL BE XX (GPS WILL BE AHEAD OF UTC BY XX SECONDS) POC: CIVIL NON AVIATION NAVCEN at 703 313 5900, HTTPS: //WWW. NAVCEN. USCC. GOV, CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, https://www.faa.gov/air_traffic/nas/gps_reports/, MILITARY CPS Operations Center at <u>HTTPS://CPS.AFSPC.AF.MIL/CPSOC</u>, DSN 560 2541, COMM 719 567 2493, <u>CPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/CPS</u>, MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERC_AF.MIL</u> See Figure 10-1 for POC format

Figure 10-13 LEAPSEC NANU Message Template

IS :

NOT SUE 1.	TICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS 3J: LEAP SECOND CONDITION: THE INTERNATIONAL EARTH ROTATION SERVICE (IERS) HAS ANNOUNCED THE INTRODUCTION OF A LEAP SECOND TO OCCUR AT THE END OF MMM YYYY
2.	COORDINATED UNIVERSAL TIME (UTC) WILL SEQUENCE AS FOLLOWS: DD MMM YYYY HH HOURS MM MINUTES SS SECONDS DD MMM YYYY HH HOURS MM MINUTES SS SECONDS DD MMM YYYY HH HOURS MM MINUTES SS SECONDS
3.	FOR GPS, AS WITH PREVIOUS LEAP SECOND UPDATES, THE UTC DATA IN SUBFRAME 4, PAGE 18 OF THE NAVIGATION MESSAGE WILL CHANGE IN ACCORDANCE WITH IS-GPS-200.
	FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L2C WILL CHANGE IN ACCORDANCE WITH IS-GPS-200.
	FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN SUBFRAME 3, PAGE 1 OF THE CNAV-2 DATA FOR L1C WILL CHANGE IN ACCORDANCE WITH IS-GPS-800.
	FOR GPS, IF/AS AVAILABLE, THE UTC DATA IN MESSAGE TYPE 33 OF THE CNAV DATA FOR L5 WILL CHANGE IN ACCORDANCE WITH IS-GPS-705.
	BEFORE THE LEAP SECOND GPS-UTC IS XX (GPS IS AHEAD OF UTC BY XX SECONDS)
	AFTER THE LEAP SECOND GPS-UTC WILL BE XX (GPS WILL BE AHEAD OF UTC BY XX SECONDS)
4.	See Figure 10-1 for POC format

Figure 10-13 LEAPSEC NANU Message Template

ICD870-134 :

Section Number :

10.1.4.0-9

WAS:

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) LAUNCH JDAY JJJ 1. NANU TYPE: LAUNCH NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XXX PRN: XX LAUNCH JDAY: JJJ LAUNCH TI ME ZULU: HHMM
2. GPS SATELLITE SVN XXX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE TO SERVICE.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u> , CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> , MILITARY - GPS Operations Center at <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC</u> , DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u> , <u>HTTP: //WWW.SCHRIEVER.AF.MIL/GPS</u> , MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u>

Figure 10-14 LAUNCH NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) LAUNCH JDAY JJJ 1. NANU TYPE: LAUNCH NANU NUMBER: YYYYSSS NANU DTG: DDHHMZ MMM YYYY SVN: XXX PRN: XX LAUNCH JDAY: JJJ LAUNCH TI ME ZULU: HHMM
2. GPS SATELLITE SVN XXX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE TO SERVICE.
3. POC: CIVIL NON AVIATION NAVCEN at 703 313 5900, <u>HTTPS://WWW.NAVCEN.USCC.COV</u> , CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/,</u> MILITARY CPS Operations Center at <u>HTTPS://CPS.AFSPC.AF.MIL/CPSOC</u> , DSN 560 2541, COMM 719 567 2493, <u>CPS_SUPPORT@SCHRIEVER.AF.MIL</u> , <u>HTTP://WWW.SCHRIEVER.AF.MIL/CPSOC</u> , MILITARY ALTERNATE JOINT SPACE OPERATIONS CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERC.AF.MIL</u> <u>See Figure 10-1 for POC format</u>

Figure 10-14 LAUNCH NANU Message Template

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVNXXX (PRNXX) LAUNCH JDAY JJJ
1. NANU TYPE: LAUNCH NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX LAUNCH JDAY: JJJ LAUNCH JIME ZULU: HHMM
2. GPS SATELLITE SVN XXX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE TO SERVICE.

3. See Figure 10-1 for POC format

Figure 10-14 LAUNCH NANU Message Template

ICD870-136 :

Section Number :

10.1.4.0-11

WAS :

JSPOCCOMBATOPS@VANDENBERG. AF. MIL

Figure 10-15 DECOM NANU Message Template

Redlines :

NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) DECOMMI SSI ONI NG JDAY JJJ/HHMM 1. NANU TYPE: DECOM NANU NUMBER: YYYYSSS NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYSSS REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX UNUSABLE START JDAY: JJJ UNUSABLE START TI ME ZULU: HHMM UNUSABLE START CALENDAR DATE: DD MMM YYYY DECOMMI SSI ONI NG START TI ME ZULU: HHMM DECOMMI SSI ONI NG START CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE AS OF JDAY JJJ (DD MMM YYYY) AND REMOVED FROM THE GPS CONSTELLATION ON JDAY JJJ (DD MMM YYYY) AT HHMM ZULU.
3. POC: CIVIL NON AVIATION NAVCEN at 703 313 5000, <u>HTTPS: //WWW.NAVCEN.USCC.GOV</u> , CIVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u> . <u>MILITARY CPS Operations Center at <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC</u>, DSN 560 2541, COMM 719 567 2493, <u>CPS_SUPPORT@SCHRIEVER.AF.MIL</u>, <u>HTTP://WWW.SCHRIEVER.AF.MIL/CPSS</u>, <u>MILITARY_ALTERNATE_JOINT_SPACE_OPERATIONS_CENTER, DSN 276 9994, COMM 805 606 9994, <u>JSPOCCOMBATOPS@VANDENBERC.AF.MIL</u> <u>See Figure 10-1 for POC format</u></u></u>

Figure 10-15 DECOM NANU Message Template

IS :

	NOTI CE ADVI SORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVNXXX (PRNXX) DECOMMI SSI ONI NG JDAY JJJ/HHMM
I	I. NANU TYPE: DECOM
I	NANU NUMBER: YYYYSSS
I	NANU DTG: DDHHMMZ MMM YYYY
I	REFERENCE NANU: YYYYSSS
I	REF NANU DTG: DDHHMMZ MMM YYYY
I	SVN: XXX
I	PRN: XX
I	UNUSARIE START IDAY: III
I	INVISABLE START TIME ZILLI- HHMM
I	INVISABLE START CALENDAR DATE: DD MMM VVVV
I	DECOMPLETATION CALINAR DATE. DE MARTITI
I	DECOMMENDATION ING STAAT JUAT. JJJ DECOMMENDATION ING STAAT TIME ZIH I. HINM
I	DECOMMENDATION NG START TIME ZULU; HINM DECOMMENDATION NG START (LIME ZULU; HINM)
I	DECOMINI SSIONING SIARI CALENDAR DATE: DD MINIM YYYY
I	
I	A CONDITION OR CATELLITE CONVEY (DDNA) WAS INVICADED AS OF DAY, MIL (DD MAL MANDA AND
	2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WAS UNUSABLE AS OF JDAY JJJ (DD MMM YYYY) AND REMOVED FROM THE GPS CONSTELLATION ON JDAY JJJ (DD MMM YYYY) AT HHMM ZULU.
I	

3. See Figure 10-1 for POC format

Figure 10-15 DECOM NANU Message Template

10.3.0-2

WAS:

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNN SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM
NANU TYPE: FCSTDV NANU NUMBER: YYYYNN NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX
START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY
CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/.</u> MLLITARY - GPS Operations Center at <u>HTTPS://GPS.AFSPC.AF.MIL/GPS0C</u>, DSN 560-2541, COMM 719-567-2493, GPS SUPPORT#SCHRIEVER.AF.MIL, <u>HTTP://WWW.SCHRIEVER.AF.MIL/GPS0</u>, COMM 805-606-9994, JSPOCCOMBATOPSEWANDENBERG.AF.MIL

Figure 10-16 NANU Message Template

Redlines :

 NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNN

 SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM

 1. NANU TYPE: FCSTDV

 NANU NUMBER: YYYNNN

 NANU DTG: DDHHMMZ MMM YYYY

 REFERENCE NANU: YYYNNN

 REF NANU DTG: DDHHMMZ MMM YYYY

 SVN: XXX

 PRN: XX

 START JDAY: JJJ

 START TIME ZULU: HHMM

 START CALENDAR DATE: DD MMM YYY

 STOP JDAY: JJJ

 STOP TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP TIME ZULU: HHMM

 STOP OC CLENDAR DATE: DD MMM YYY

 2.

 CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYY) ENDING HHMM ZULU.

 3.
 POC: CLVIL NON AVIATION NAVCEN at 703 313 5000, <u>HTTPS://WWW NAVCEN.USCG.COV</u>, CLVIL AVIATION FAA Satellite Operations Group at 540 422 4178, <u>https://www.faa.gov/air traffic/ms/gps reports/-</u> MLITARY CCPS Operations Center at <u>HTTPS://CPS AFSPC.AF.ML/CPS0.</u> DSN 560 2541, COMM 719 567 2403, CPS SUPPORTSCHREVER AF.ML, <u>HTTP://WWW SCHREVER AF.ML/CPS0.</u> MLITARY ALTERNATE. JOINT SPACE OPERATIONS CENTER, DSN 276 9094, COMM 805 606 9094, JSPOCCOMBATOPSAVABEDBERC, AF.ML

 See Figure 10-1 for POC format

Figure 10-16 NANU Message Template

NOTTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNNN SUBJ: SVNXXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM - JDAY JJJ/HHMM
1. NANU TYPE: FCSTDV NANU NUMBER: YYYYNNN NANU DTG: DDHHMMZ MMM YYYY REFERENCE NANU: YYYYNNN REF NANU DTG: DDHHMMZ MMM YYYY SVN: XXX PRN: XX
PRN: XX START JDAY: JJJ START TIME ZULU: HHMM START CALENDAR DATE: DD MMM YYYY STOP JDAY: JJJ STOP TIME ZULU: HHMM STOP CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMM ZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
3. See Figure 10-1 for POC format

Figure 10-16 NANU Message Template

ICD870-175 :

Section Number :

10.3.4.0-2

WAS :

IS :

3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, <u>https://www.faa.gov/air_traffic/nas/gps_reports/</u>, MILITARY - GPS Operations Center at <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC</u>, DSN 560-2541, COMM 719-567-2493, <u>GPS_SUPPORT@SCHRIEVER.AF.MIL</u>, <u>HTTP: //WWW.SCHRIEVER.AF.MIL/GPS</u>, MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, <u>JSPOCCOMBATOPS@VANDENBERG.AF.MIL</u>

Figure 10-23 Contact Information



Figure 10-23 Contact Information

IS :

3. POC: CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, <u>HTTPS: //WWW.NAVCEN.USCG.GOV</u>, CIVIL AVIATION - FAA NASEO AT 540-422-4178, <u>HTTPS: //WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/</u>, MILITARY - GPS OPERATIONS CENTER AT <u>HTTPS: //GPS.AFSPC.AF.MIL/GPSOC/</u>, DSN 560-2541, COMM 719-567-2493, <u>GPSOPERATIONSCENTER@US.AF.MIL</u>, <u>HTTP: //WWW.SCHRIEVER.AF.MIL/GPS/</u>, MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL

Figure 10-23 Contact Information

ICD870-189:

Section Number :

20.1.0-1

WAS:

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA.

Redlines :

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA. Users are advised that the Point of Contact (POC) information contained in Section 3 of the OA samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The OA examples include POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent OAs for up-to-date information.

IS :

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA. Users are advised that the Point of Contact (POC) information contained in Section 3 of the OA samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The OA examples include POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent OAs for up-to-date information.

20.1.0-2

WAS :

UNCLASSI FI ED GPS OPERATIONAL ADVISORY 086. 0A1 27 MAR 2009 SUBJ: GPS STATUS SATELLITES, PLANES, AND CLOCKS (CS=CESIUM RB=RUBIDIUM): 1. BLOCK I BLOCK I I PLANE NONE Α. PRNS 01, SLOT B2, 03, 04, 05, C2, D4, B6, CS, RB, RB, 10, E3, CS, 24, D5, Β. 02, D1, 06, C5, 11, D2, 07. 08 12, B4, 13, F3, 14 F1 08, 09, A3, A1, CS, CS, 22, 23, E2, F4, Ă6, RB, RB, RB, RB, RB, RB, RB, RB CLOCK PRNS 15, SLOT F2, 25, A5, 21, D3, 18, 19, E4, C3, RB, RB, BLOCK II 16, B1, 20, 27, 17, 26, 28 B3 **Č4**, **F**5, Ã4, E1, PLANE RB, RB, RB, RB. RB, CS, RB, CS, CLOCK RB, RB. RB. RB PRNS SLOT 30, B5, BLOCK II 29, C1, 31, 32 E5 A2. PLANE RB, CLOCK CS, RB, RB PRNS 33, SLOT A2, 34, C3, C*. BLOCK III: 35 PLANE F4 **CLOCK** RB, RB, RB CURRENT ADVI SORI ES AND FORECASTS: FORECASTS: FOR SEVEN DA 2. FOR SEVEN DAYS AFTER EVENT CONCLUDES. Α. MSG DATE/TIME SUMMARY (JDAY/ZULU TIME START - STOP) NANU PRN TYPE 2009022 FCSTDV 092/1600-093/0630 261836Z MAR 2009 18 B. ADVI SORIES: NANU MSG DATE/TIME PRN TYPE SUMMARY (JDAY/ZULU TIME START - STOP) GENERAL: NANU MSG DATE/TIME PRN TYPE SUMMARY (JDAY/ZULU TIME START - STOP) 202158Z MAR 2009 241836Z MAR 2009 262212Z MAR 2009 2009020 GENERAL /-/ |- | |- | 2009021 01 LAUNCH 2009023 GENERAL 3. REMARKS: A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS OPERATIONS CENTER AT 719-567-2541 OR DSN 560-2541. B. CIVIL NON-AVIATION: US COAST GUARD NAVCEN AT 703-313-5900 24 HOURS DAILY AND INTERNET HTTPS://WWW.NAVCEN. USCG. GOV. C. CI VIL AVI ATI ON: FAA SATELLITE OPERATI ONS GROUP AT 540-422-4178, HTTPS://WWW.FAA. GOV/AI R_TRAFFIC/NAS/GPS_REPORTS/. D. MI LITARY SUPPORT WEBPAGES CAN BE FOUND AT THE FOLLOWING HTTPS: //GPS. AFSPC. AF. MI L/GPS OR HTTPS: //GPS. AFSPC. AF. MI L/GPSOC.

*Note: Section 1.C of the example OA message shown above contains example data for the GPS III SVs to show the type of data that will go in this section in the OCX era. This example is not meant to represent the actual GPS constellation configuration.

Figure 20-1 Sample Operational Advisory
Redlines :

UNCLASSI FI ED GPS OPERATI ONAL ADVI SORY 086. 0A1 SUBJ: GPS STATUS 27 MAR 2009					
1. SATELLITES	1. SATELLITES, PLANES, AND CLOCKS (CS=CESI UM RB=RUBI DI UM):				
B. BLOCK II : PLANE	PRNS 01, 02, 03, 04 SLOT B2 D1 C2 D4	, 05, B6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	09, 10, 11, 12, 13, 14 A1 F3 D2 B4 F3 F1	
CLOCK :	RB, RB, CS, RB PRNS 15 16 17 18	, DO, , RB, 19	RB, RB, CS,	CS, CS, RB, RB, RB, RB 23 24 25 26 27 28	
PLANE :	SLOT F2, B1, C4, E4	, 13, , C3, RB	E1, D3, E2, BB, BB, BB, BB, BB, BB, BB, BB, BB, B	F4, D5, A5, F5, A4, B3 PR CS PR PR CS PR	
BLOCK II : PLANE	PRNS 29, 30, 31, 32 SLOT C1 B5 A2 F5	, кр,	KD, KD, KD,	KD, CS, KD, KD, CS, KD	
CLOCK :	RB, CS, RB, RB PRNS 33, 34, 35				
PLANE : CLOCK :	SLOT A2, C3, F4 RB, RB, RB				
2. CURRENT AI A. FORECASTS:	OVI SORI ES AND FORECAS FOR SEVEN	TS: DAYS	AFTER EVENT	CONCLUDES.	
NANU	MSG DATE/TI ME	PRN	ТҮРЕ	SUMMARY (JDAY/ZULU TIME START - STOP	')
2009022 B. ADVI SORI ES	261836Z MAR 2009 S:	18	FCSTDV	092/1600-093/0630	
NANU	MSG DATE/TI ME	PRN	TYPE	SUMMARY (JDAY/ZULU TIME START - STOP	')
C. GENERAL: NANU	MSG DATE/TIME	PRN	TYPE	SUMMARY (JDAY/ZULU TIME START - STOP	')
2009020	202158Z MAR 2009	01	GENERAL	1-1	
2009021 2009023	241836Z MAR 2009 262212Z MAR 2009	01	GENERAL	/-/ /-/	
A. THE POINT	OF CONTACT FOR CPS M	I LI TA	RY OPERATION/	AL SUPPORT IS THE GPS OPERATIONS CENTE	₽ ₽
B. CIVIL NON-	AVIATION: US COAST C	UARD-	NAVCEN AT 703	3-313-5900-24 HOURS DAILY AND INTERNET	2
HTTPS: // WWW. NAVCEN. USCC. COV C. CIVIL AVIATION: FAA SATELLITE OPERATIONS GROUP AT 540-422-4178,					
HTTPS://www.FAA.GOV/AFR_TRAFFIC/NAS/GPS_REPORTS/. D. MILLTARY SUPPORT WEBPACES CAN BE FOUND AT THE FOLLOWING HTTPS://GPS.AFSPC.AF.MIL/GPS_OR					
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS					
UPERATIONS CENTER AT HITPS://UPS.AFSPC.AF.MIL/GPSUC/, DSN 300-2341, CUMM /19-367-2493, GPSOPERATIONSCENTER@US.AF.MIL, R CLVLL NON AVIATION NAVCEN AT 703-313-5900 HTTPS://WWW NAVCEN USCC COV					
B. CIVIL NUN-AVIATION – NAVCEN AT 703-313-5900, HTTPS: //WWW. NAVCEN. USCG. GOV, C. CIVIL AVIATION – FAA NASEO AT 540-422-4178, HTTPS: //WWW. EAA COV/ADD TRAFFIC (NAS/CORE DEPONDES /					
D. MILITARY	$\frac{1}{1} \frac{1}{1} \frac{1}$	SPACE	<u>OPERATIONS</u>	<u>CENTER, DSN 275-3522, COMM 805-605-352</u>	<u>2,</u>
<u>351000000000000000000000000000000000000</u>	De maintennieur, ar, mit				

*Note: Section 1.C of the example OA message shown above contains example data for the GPS III SVs to show the type of data that will go in this section in the OCX era. This example is not meant to represent the actual GPS constellation configuration.

Figure 20-1 Sample Operational Advisory

IS :

UNCLASSI FI ED GPS OPERATI ONAL ADVI SORY O SUBJ: GPS STATUS 27 MAR 2009	86. OA	A1		
1. SATELLITES, PLANES, AND CLOCKS	(CS=	=CESIUM RB=RUBIDIUM):		
B. BLOCK II : PRNS 01, 02, 03, 04 BLANE : SLOT B2 D1 C2 D4	, 05, B6	06, 07, 08, 09, 10, 11, 12, 13, 14 C5 A6 A3 A1 F3 D2 B4 F3 F1		
CLOCK : RB, RB, CS, RB	, DO, , RB,	RB, RB, CS, CS, CS, RB, RB, RB, RB, RB		
PLANE : SLOT F2, B1, C4, E4	, 19, , C3,	E1, D3, E2, F4, D5, A5, F5, A4, B3		
BLOCK II : PRNS 29, 30, 31, 32	, КБ,	RD, RD, RD, RD, CS, RD, RD, CS, RD		
PLANE : SLOT CI, B5, A2, E5 CLOCK : RB, CS, RB, RB				
C*. BLOCK III: PRNS 33, 34, 35 PLANE : SLOT A2, C3, F4				
2. CURRENT ADVISORIES AND FORECAS	TS:			
A. FORECASTS: FOR SEVEN NANU MSG DATE/TIME	DAYS PRN	S AFTER EVENT CONCLUDES. TYPE SUMMARY (JDAY/ZULU TIME START - STOP)		
2009022 261836Z MAR 2009	18	FCSTDV 092/1600-093/0630		
B. ADVISORIES: NANU MSG DATE/TIME	PRN	TYPE SUMMARY (JDAY/ZULU TIME START - STOP)		
C. GENERAL:				
NANU MSG DATE/TIME	PRN	TYPE SUMMARY (JDAY/ZULU TIME START - STOP)		
2009020 202158Z MAR 2009 2009021 241836Z MAR 2009	01	GENERAL /-/ LAUNCH /-/		
2009023 262212Z MAR 2009 3. REMARKS:		GENERAL /-/		
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS OPERATIONS CENTER AT HTTPS: //GPS AFSPC AF MIL/GPSOC/ DSN 560-2541, COMM 719-567-2493.				
<u>GPSOPERATIONSCENTER®US. AF. ML</u> , B. CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS: //WWW.NAVCEN, USCG. GOV.				
C. CIVIL AVIATION – FAA NASEO AT HTTPS: //WW, FAA, GOV/AIR TRAFFIC/N	540-4 AS/GP	422-4178, PS_REPORTS/.		
D. MILITARY ALTERNATE – COMBINED JSPOCCOMBATOPS@VANDENBERG. AF. MIL	SPACE	E OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,		

*Note: Section 1.C of the example OA message shown above contains example data for the GPS III SVs to show the type of data that will go in this section in the OCX era. This example is not meant to represent the actual GPS constellation configuration.

Figure 20-1 Sample Operational Advisory

20.5.0-2

WAS :

3.	REMARKS:
Α.	THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS OPERATIONS CENTER
AT	719-567-2541 OR DSN 560-2541.
В.	CIVIL NON-AVIATION: US COAST GUARD NAVCEN AT 703-313-5900 24 HOURS DAILY AND INTERNET
HTI	TPS://WWW. NAVCEN. USCG. GOV.
С.	CIVIL AVIATION: FAA SATELLITE OPERATIONS GROUP AT 540-422-4178,
HTI	TPS://WWW.FAA.GOV/AIR_TRAFFIC/NAS/GPS_REPORTS/.
D.	MILLITARY SUPPORT WEBPAGES CAN BE FOUND AT THE FOLLOWING HTTPS: //GPS.AFSPC.AF.MIL/GPS OR
HTI	TPS: //GPS. AFSPC. AF. MI L/GPSOC.

Figure 20-5 OA Section 3

Redlines :

IS :



Figure 20-5 OA Section 3

3. REMARKS: A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS OPERATIONS CENTER AT <u>HTTPS://GPS.AFSPC.AF.MIL/GPSOC</u>/, DSN 560-2541, COMM 719-567-2493, <u>GPSOPERATIONSCENTER@US.AF.MIL</u>, B. CIVIL NON-AVIATION – NAVCEN AT 703-313-5900, <u>HTTPS://WWW.NAVCEN.USCG.GOV</u>, C. CIVIL AVIATION – FAA NASEO AT 540-422-4178, <u>HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/</u>, D. MILITARY ALTERNATE – COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL

Figure 20-5 OA Section 3

Clean-Up and Clarification Proposed Changes

ICD870-304 :

Section Number :

1.1.0-5

WAS :

The new or modified file formats: .nnu (updated NANU), .ale (new ESHS), .blm (new YUMA), .bl3 (new SEM), .oa1 (updated OA), and as2.txt (new A-S Status) handle a larger number of SVNs and/or PRNs and more clearly specify zero padding and whitespace so automated parsing can be done with less assumptions.

Redlines :

The new or modified file formats: .nnu (updated NANU), .ale (new ESHS), .blm (new YUMA), .bl3 (new SEM), .oa1 (updated OA), and as2.txt (new A-S Status) handle a larger number of SVNs and/or PRNs and more clearly specify zero padding and whitespace so automated parsing can be done with <u>lessfewer</u> assumptions.

IS :

The new or modified file formats: .nnu (updated NANU), .ale (new ESHS), .blm (new YUMA), .bl3 (new SEM), .oa1 (updated OA), and as2.txt (new A-S Status) handle a larger number of SVNs and/or PRNs and more clearly specify zero padding and whitespace so automated parsing can be done with fewer assumptions.

ICD870-11 :

Section Number :

1.3.0-2

WAS :

The following signatories must approve this ICD to make it effective.

- 1. Air Force Space Command (AFSPC), GPS Directorate (GP) Space and Missile Systems Center (SMC)
- 2. Air Force Space Command (AFSPC), 50th Space Wing (50 SW)
- 3. OCX Contractor
- 4. Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)
- 5. Department of Transportation (DOT), Federal Aviation Administration (FAA)

Redlines :

The following signatories must approve this ICD to make it effective.

- 1. Air Force Space Command (AFSPC), GPS Directorate (GP) Space and Missile Systems Center (SMC)
- 2. Air Force Space Command (AFSPC), 50th Space Wing (50 SW)

3. OCX Contractor

- 4. Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)
- <u>54</u>. Department of Transportation (DOT), Federal Aviation Administration (FAA)

IS :

The following signatories must approve this ICD to make it effective.

1. Air Force Space Command (AFSPC), GPS Directorate (GP) Space and Missile Systems Center (SMC)

2. Air Force Space Command (AFSPC), 50^{th} Space Wing (50 SW)

3. Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)

4. Department of Transportation (DOT), Federal Aviation Administration (FAA)

ICD870-19 :

Section Number : 2.1.0-2 WAS: **Specifications** Federal None Military None Other Government Activity SS-CS-800 **GPS III Control Segment Specification Global Positioning** Systems Wing (GPSW) Current Version **Redlines** : **Specifications** Federal None Military None Other Government Activity **SS-CS-800 GPS III Control Segment Specification Global Positioning** Current Version Systems Wing (GPSW) N/A **IS** : **Specifications** Federal None Military None

ICD870-23 :

Section Number :

2.1.0-6

 $\boldsymbol{\mathsf{WAS}}:$

IS-GPS-200 Current Version	Navstar GPS Space Segment / Navigation User Interface
IS-GPS-705 Current Version	Navstar GPS Space Segment / User Segment L5 Interfaces
IS-GPS-800 Current Version	Navstar GPS Space Segment / User Segment L1C Interfaces
GP-03-001A 20 April 2006	GPS Interface Control Working Group (ICWG) Charter
MOA February 1992	Memorandum of Agreement Between the United States Coast Guard and the United States Space Command, "Distribution of Navstar Global Positioning System (GPS) Status Information"
	(Signatories: USCG/G-NRN and USSPACECOM/DO)
MOA February 1996	Support Agreement Between the United States Coast Guard and the United States Air Force Space Command, "Distribution of Navstar Global Positioning System (GPS) Status Information"
	(Signatories: Commanding Officer NAVCEN and AFSPC/DO)
MOA February 2010	Memorandum of Agreement between the Joint Functional Component Command for Space the U.S. Coast Guard Navigation Center and the FAA National Operations Control Center with respect to the Support of Users of the Navstar Global Positioning System
MOA June 2014	Interagency Memorandum of Agreement with Respect to Support of Users of the Navstar Global Positioning System (GPS)
Fiscal Year 2014	Federal Radionavigation Plan
	(Signatories: Department of Homeland Security, Department of Transportation, Department of Defense)

MFR 30 June 2011	Department of the Air Force, 50th Space Wing (AFSPC) Memorandum for Record - 2 SOPS GPS Public Release Policy
6 February 2003	DODI 8500.2, Information Assurance (IA) Implementation
4 May 2011	United States Department of Defense X.509 Certificate Policy

Redlines :

IS-GPS-200 Current Version	Navstar GPS Space Segment / Navigation User Interface
IS-GPS-705 Current Version	Navstar GPS Space Segment / User Segment L5 Interfaces
IS-GPS-800 Current Version	Navstar GPS Space Segment / User Segment L1C Interfaces
GP-03-001 20 April 2006 <u>Current</u> Version	GPS Interface Control Working Group (ICWG) Charter
MOA February 1992	Memorandum of Agreement Between the United States Coast Guard and the United States Space Command, "Distribution of Navstar Global Positioning System (GPS) Status Information"
	(Signatories: USCG/G-NRN and USSPACECOM/DO)
MOA February 1996	Support Agreement Between the United States Coast Guard and the United States Air Force Space Command, "Distribution of Navstar Global Positioning System (GPS) Status Information"
	(Signatories: Commanding Officer NAVCEN and AFSPC/DO)
MOA February 2010	Memorandum of Agreement between the Joint Functional Component Command for Space the U.S. Coast Guard Navigation Center and the FAA National Operations Control Center with respect to the Support of Users of the Navstar Global Positioning System
MOA June 2014 Current Version	Interagency Memorandum of Agreement with Respect to Support of Users of the Navstar Global Positioning System (GPS)

Fiscal Year	Federal Radionavigation Plan		
2014<u>2017</u>	(Signatories: Department of Homeland Security, Department of Transportation, Department of Defense)		
MFR 30 June 2011	Department of the Air Force, 50th Space Wing (AFSPC) Memorandum for Record - 2 SOPS GPS Public Release Policy		
6 February 2003	DODI 8500.2, Information Assurance (IA) Implementation		
4 May 2011	United States Department of Defense X.509 Certificate Policy		

IS :

Navstar GPS Space Segment / Navigation User Interface
Navstar GPS Space Segment / User Segment L5 Interfaces
Navstar GPS Space Segment / User Segment L1C Interfaces
GPS Interface Control Working Group (ICWG) Charter
Interagency Memorandum of Agreement with Respect to Support of Users of the Navstar Global Positioning System (GPS)
Federal Radionavigation Plan
(Signatories: Department of Homeland Security, Department of Transportation, Department of Defense)
Department of the Air Force, 50th Space Wing (AFSPC) Memorandum for Record - 2 SOPS GPS Public Release Policy
DODI 8500.2, Information Assurance (IA) Implementation
United States Department of Defense X.509 Certificate Policy

3.1.0-1

WAS :

The USCG provides a Portal accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

Redlines :

The USCG provides a <u>Portalwebpage</u> accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

IS :

The USCG provides a webpage accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

3.1.0-3

WAS :

Figure 3-1 depicts a generalized GPS Product Distribution Process which begins with a **End-User** interacting with a GPS Product redistribution node (e.g., USCG NIS) to retrieve the desired GPS Products. The diagram reflects that a **potential data Corruption Source** actor may introduce data corruption at any time during this re-distribution process. The GPS Product End-User may then validate and/or transform the Information Product before use in a Processing System. The roles of **Potential Data Corruption Source** and **GPS Product End-User** may be performed by the same or by different individuals.

Redlines :

Figure 3-1 depicts a generalized GPS Product Distribution Process which begins with a **End-User** interacting with a GPS Product redistribution node (e.g., USCG NIS) to retrieve the desired GPS Products. The diagram reflects that a **potential data Corruption Source** actor may introduce data corruption at any time during this re-distribution process. The GPS Product End-User may then validate and/or transform the Information Product before use in a Processing System. The roles of **Potential Data Corruption Source** and **GPS Product End-User** may be performed by the same or by different individuals.

IS :

Figure 3-1 depicts a generalized GPS Product Distribution Process which begins with a **End-User** interacting with a GPS Product redistribution node to retrieve the desired GPS Products. The diagram reflects that a **potential data Corruption Source** actor may introduce data corruption at any time during this re-distribution process. The GPS Product End-User may then validate and/or transform the Information Product before use in a Processing System. The roles of **Potential Data Corruption Source** and **GPS Product End-User** may be performed by the same or by different individuals.

ICD870-665 :

Section Number :

3.1.0-12

WAS :

Appendices 1-5 of this ICD documents the minimum information content and formats which are required to achieve backward compatibility compliance. The GPS Ontology including Transition and Support Products will be published in the USCG NIS web site, currently <u>http://www.navcen.uscg.gov</u>.

Redlines :

Appendices 1-5 of this ICD documents the minimum information content and formats which are required to achieve backward compatibility compliance. The GPS Ontology including Transition and Support Products will be published <u>ion</u> the USCG <u>NISNavigation webCenter sitewebsite</u>, currently <u>https://www.navcen.uscg.gov</u>.

IS :

Appendices 1-5 of this ICD document the minimum information content and formats which are required to achieve backward compatibility compliance. The GPS Ontology including Transition and Support Products will be published on the USCG Navigation Center website, currently <u>https://www.navcen.uscg.gov</u>.

ICD870-34 :

Section Number :

3.1.0-21

WAS :

The products defined in this ICD are listed in Table 3-I and Table 3-II, in the form of information exchange matrices.

Redlines :

The products defined in this ICD are listed in Table 3-I and Table 3-II, in the form of information exchange matrices.

IS :

The products defined in this ICD are listed in Table 3-I in the form of information exchange matrices.

3.1.0-30

WAS :

Table 3-I Information Product Information Exchange Matrix

Producer	Modern & Legacy Data Exchange Identification	Description	Security Classification
CS	Modern Identification: GPS Advisory Legacy Identification: Notice Advisory to Navstar Users (NANU)	The GPS Advisory exchange information product includes a single advisory notification concerning a GPS space event and associated GPS space vehicle. See GPS Advisory IEPD for more details. Published on a periodic basis, based on operational events/needs.	Unclassified / Open / Public Releasable
CS	Modern Identification: GPS Advisory Collection Legacy Identification: Satellite Outage File (SOF)	The GPS Advisory Collection Exchange information product includes a collection of advisory notifications of all available historical, current and predicted satellite outage space events. See GPS Advisory IEPD for more details. Produced in response to the generation of a GPS Advisory	Unclassified / Open / Public Releasable
CS	Modern Identification: Ops Status Legacy Identification: Operational Advisory (OA)	(NANO) by the CS. The Ops Status Exchange information product includes an Ops Status notification concerning the GPS constellation and relevant GPS space events. See Ops Status IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable
CS	Modern Identification: Public Common Almanac Legacy Identification: (1) GPS Almanacs (SEM,YUMA) (2) Anti-Spoof Status (3) ESHS	The Public Common Almanac Exchange information product includes orbital state and health status of the GPS constellation. See Public Common Almanac IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable

9

Redlines :

Table 3-I Information Product Information Exchange Matrix

Producer	Modern & Legacy Data	Description	Security Classification
CS	Modern Identification: GPS Advisory Legacy Identification: Notice Advisory to Navstar Users (NANU)	The GPS Advisory exchange information product includes a single advisory notification concerning a GPS space event and associated GPS space vehicle. See GPS Advisory IEPD for more details. Published on a periodic basis, based on operational events/needs.	Unclassified / Open / Public Releasable
CS	Modern Identification: GPS Advisory Collection Legacy Identification: Satellite Outage File (SOF)	The GPS Advisory Collection Exchange information product includes a collection of advisory notifications of all available historical, current and predicted satellite outage space events. See GPS Advisory IEPD for more details. Produced in response to the generation of a GPS Advisory (NANU) by the CS.	Unclassified / Open / Public Releasable
CS	Modern Identification: Ops Status Legacy Identification: Operational Advisory (OA)	The Ops Status Exchange information product includes an Ops Status notification concerning the GPS constellation and relevant GPS space events. See Ops Status IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable
CS	Modern Identification: Public Common Almanac Legacy Identification: (1) GPS Almanacs (SEM,YUMA) (2) Anti- Spoof Status (3) ESHS	The Public Common Almanac Exchange information product includes orbital state and health status of the GPS constellation. See Public Common Almanac IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable

9

Table 3-I Information Product Information Exchange Matrix

Producer	Modern & Legacy Data	Description	Security Classification
CS	Exchange Identification Modern Identification: GPS Advisory Legacy Identification: Notice Advisory to Navstar Users (NANU)	The GPS Advisory exchange information product includes a single advisory notification concerning a GPS space event and associated GPS space vehicle. See GPS Advisory IEPD for more details. Published on a periodic basis, based on operational events/needs.	Unclassified / Open / Public Releasable
CS	Modern Identification: GPS Advisory Collection Legacy Identification: Satellite Outage File (SOF)	The GPS Advisory Collection Exchange information product includes a collection of advisory notifications of all available historical, current and predicted satellite outage space events. See GPS Advisory IEPD for more details. Produced in response to the generation of a GPS Advisory (NANU) by the CS	Unclassified / Open / Public Releasable
CS	Modern Identification: Ops Status Legacy Identification: Operational Advisory (OA)	The Ops Status Exchange information product includes an Ops Status notification concerning the GPS constellation and relevant GPS space events. See Ops Status IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable
CS	Modern Identification: Public Common Almanac Legacy Identification: (1) GPS Almanacs (SEM,YUMA) (2) Anti-Spoof Status (3) ESHS	The Public Common Almanac Exchange information product includes orbital state and health status of the GPS constellation. See Public Common Almanac IEPD for more details. Nominally published once daily.	Unclassified / Open / Public Releasable

3.2.5.0-1

WAS :

The USCG provides a Portal accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

Redlines :

The USCG provides a <u>Portalwebpage</u> accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

IS :

The USCG provides a webpage accessible from the public Internet to allow users, with a standard web browser, to discover and retrieve publicly releasable GPS products.

ICD870-719 :

Section Number :

3.2.5.0-3

WAS :

As shown in Figure 3-6, the NAVCEN Information System (NIS) is the distribution point for authoritative GPS Products disseminated to the public. The NAVCEN receives these products from the GPS Control Segment (OCX) and the GPS community (led by the Air Force GPS Program Office). The GPS products consist of regularly published operational GPS information products (see Table 3-I) as well as Transition and Support Products (see Table 3-II).

Redlines :

As shown in Figure 3-6, the NAVCEN Information System (NIS) is the distribution point for authoritative GPS Products disseminated to the public. The NAVCEN receives these products from the GPS Control Segment (OCX) and the GPS community (led by the Air Force GPS Program Office). The GPS products consist of regularly published operational GPS information products (see Table 3-I) as well as Transition and Support Products (see Table 3-III).

IS :

As shown in Figure 3-6, the NAVCEN is the distribution point for authoritative GPS Products disseminated to the public. The NAVCEN receives these products from the GPS Control Segment (OCX) and the GPS community (led by the Air Force GPS Program Office). The GPS products consist of regularly published operational GPS information products (see Table 3-I) as well as Transition and Support Products (see Table 3-III).

3.3.0-6

WAS :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has an application which directly processes ASCII text file formats:

1. Download the desired Information Product and associated IEPD (see Table 3-III) from USCG NIS web site or an alternate redistribution site. Note: Because the IEPD for an Information Product will change very infrequently, this step could be performed once for a new IEPD revision and then reused repeatedly without downloading again.

2. Just prior to use, validate the Digital Signature of the Information Product and the Signed IEPD containing the XSLT stylesheets using compliant standard COTS/Library and the currently published CS public certificate.

3. If the signatures do not validate in Step 2, then either the Information Product or the signed IEPD is not authentic (not produced by the CS) or has been corrupted. Do not use. The user should return to step 1.

4. If the signatures validate in both Step 2 and Step 3, then apply the XSLT stylesheet using standard COTS/Library to produce the desired ASCII file format.

Note: A user with a non-critical application who intends to bypass verifying data integrity only needs to perform Step 1 and then Step 4.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform steps 2, 3 and 4. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

Redlines :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has an application which directly processes ASCII text file formats:

1. Download the desired Information Product and associated IEPD (see Table 3-III) from USCG <u>NIS webNAVCEN</u> <u>sitewebsite</u> or an alternate redistribution site. Note: Because the IEPD for an Information Product will change very infrequently, this step could be performed once for a new IEPD revision and then reused repeatedly without downloading again.

2. Just prior to use, validate the Digital Signature of the Information Product and the Signed IEPD containing the XSLT stylesheets using compliant standard COTS/Library and the currently published CS public certificate.

3. If the signatures do not validate in Step 2, then either the Information Product or the signed IEPD is not authentic (not produced by the CS) or has been corrupted. Do not use. The user should return to step 1.

4. If the signatures validate in both Step 2 and Step 3, then apply the XSLT stylesheet using standard COTS/Library to produce the desired ASCII file format.

Note: A user with a non-critical application who intends to bypass verifying data integrity only needs to perform Step 1 and then Step 4.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform steps 2, 3 and 4. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

IS :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has an application which directly processes ASCII text file formats:

1. Download the desired Information Product and associated IEPD (see Table 3-III) from USCG NAVCEN website or an alternate redistribution site. Note: Because the IEPD for an Information Product will change very infrequently, this step could be performed once for a new IEPD revision and then reused repeatedly without downloading again.

2. Just prior to use, validate the Digital Signature of the Information Product and the Signed IEPD containing the XSLT stylesheets using compliant standard COTS/Library and the currently published CS public certificate.

3. If the signatures do not validate in Step 2, then either the Information Product or the signed IEPD is not authentic (not produced by the CS) or has been corrupted. Do not use. The user should return to step 1.

4. If the signatures validate in both Step 2 and Step 3, then apply the XSLT stylesheet using standard COTS/Library to produce the desired ASCII file format.

Note: A user with a non-critical application who intends to bypass verifying data integrity only needs to perform Step 1 and then Step 4.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform steps 2, 3 and 4. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

3.3.0-7

WAS :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has a modern application which directly processes CS native XML formats;

1. Download the desired Information Product (see Table 3-III) from the USCG NIS web site.

2. Just prior to use, Validate the Digital Signature of Information Product using a W3C XML Digital Signature Compliant standard COTS/Library and the currently published CS public certificate.

3. If the signature does not validate in Step 2, then the Information product is either not authentic (not produced by the CS) or the information content has been corrupted. Do not use. The user should return to step 1.

4. If the signature validates in Step 2, then the GPS Information Product is authentic and the content has not been corrupted.

Note: A user with a modern non-critical application who intends to bypass verifying data integrity only needs to perform Step 1.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform step 2. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

Redlines :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has a modern application which directly processes CS native XML formats;

1. Download the desired Information Product (see Table 3-III) from the USCG <u>NIS webNAVCEN sitewebsite</u>.

2. Just prior to use, Validate the Digital Signature of Information Product using a W3C XML Digital Signature Compliant standard COTS/Library and the currently published CS public certificate.

3. If the signature does not validate in Step 2, then the Information product is either not authentic (not produced by the CS) or the information content has been corrupted. Do not use. The user should return to step 1.

4. If the signature validates in Step 2, then the GPS Information Product is authentic and the content has not been corrupted.

Note: A user with a modern non-critical application who intends to bypass verifying data integrity only needs to perform Step 1.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform step 2. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

IS :

As shown in Figure 3-2, the steps for a user to verify the data integrity where the user has a modern application which directly processes CS native XML formats;

1. Download the desired Information Product (see Table 3-III) from the USCG NAVCEN website.

2. Just prior to use, Validate the Digital Signature of Information Product using a W3C XML Digital Signature Compliant standard COTS/Library and the currently published CS public certificate.

3. If the signature does not validate in Step 2, then the Information product is either not authentic (not produced by the CS) or the information content has been corrupted. Do not use. The user should return to step 1.

4. If the signature validates in Step 2, then the GPS Information Product is authentic and the content has not been corrupted.

Note: A user with a modern non-critical application who intends to bypass verifying data integrity only needs to perform Step 1.

Note: The provided Validate and Transform Utility (see figure 3-4) can be used to perform step 2. The user is required to download/install the CS public key on their system prior to using the Validate and Download Utility.

3.3.0-9

WAS :

The GPS CS unclassified certificate (and corresponding CS public key) will be made available to all consumers for data integrity verification via the USCG NIS web site.

Redlines :

The GPS CS unclassified certificate (and corresponding CS public key) will be made available to all consumers for data integrity verification via the USCG <u>NIS webNAVCEN</u> <u>sitewebsite</u>.

IS :

The GPS CS unclassified certificate (and corresponding CS public key) will be made available to all consumers for data integrity verification via the USCG NAVCEN website.

ICD870-704 :

Section Number :

3.3.0-12

WAS :

The USCG Portal will make the standalone offline Validate and Transform utility available on the public Internet.

Redlines :

The USCG Portal Website will make the standalone offline Validate and Transform utility available on the public Internet.

IS :

The USCG Website will make the standalone offline Validate and Transform utility available on the public Internet.

3.3.0-15

WAS :

User platform requirements for running the Validate and Transform Utility will be described on the USCG NIS website. The Utility will be digitally signed and users should validate the Authenticity of the certificate during installation.

Redlines :

User platform requirements for running the Validate and Transform Utility will be described on the USCG NISNAVCEN website. The Utility will be digitally signed and users should validate the Authenticity of the certificate during installation.

IS :

User platform requirements for running the Validate and Transform Utility will be described on the USCG NAVCEN website. The Utility will be digitally signed and users should validate the Authenticity of the certificate during installation.

4.0-1

WAS :

This section contains the verification matrix for the objects that contain requirements enumerated in this interface document. The verification matrix indicates what methodology will be used to assure these requirements are met. The information contained within this verification matrix is not intended to change any contractual obligations imposed upon the segment contractors by the government. Regardless of Highest Verification Level designation (System or Segment), the segment contractors still need to demonstrate compliance to all contractual interface documents.

The column headings of the verification matrix are explained here:

Redlines :

This section contains the verification matrix for the objects that contain requirements enumerated in this interface document. The verification matrix indicates what methodology will be used to assure these requirements are met. The information contained within this verification matrix is not intended to change any contractual obligations imposed upon the segment contractors by the government. Regardless of Highest Verification Level designation (System or Segment), the segment contractors still need to demonstrate compliance to all contractual interface documents.

The column headings of the verification matrix are explained Not here: Applicable

IS : Not Applicable WAS :

DOORS ID = Unique DOORS object identification number.

Object Number = Paragraph number of the object.

CS Effectivity = Effectivity of requirement allocated to CS (see Segment column) as defined in SS-CS-800.

SS Effectivity = Effectivity of requirement allocated to SS (see Segment column) as defined in SS-SS-800.

Highest Verification Level = The highest level (System or Segment) at which the requirement is verified. The Highest Verification Level is used to identify those requirements that require joint verification activity as explained below:

A designation of System implies the requirement must be verified by a joint verification activity that includes both sides of the interface and may involve coordination of verification activities through the government.

A designation of Segment implies the segment contractor retains full responsibility for conducting the verification event. The joint use of SS or CS assets such as the GSYS or GSS does not alter the Highest Verification Level designation from Segment.

Segment = Designated segment (Space (SV), Control (CS), or User (US) Segment) involved in the verification of the requirement. A designation of (EXTERNAL ORG) is used to identify the external organization (e.g., (NDS), (AFSCN), (NGA), etc.) involved in the verification of the requirement.

System Verification Method = Method for verifying system requirements. Verification method assignments for segment requirements will not be tracked in this ICD as they are formally described in the segment contractor verification planning CDRLs. The following verification method definitions are derived from SS-SYS-800. Verification by Inspection (I)

The inspection method verifies conformance of physical characteristics to related requirements without the aid of special laboratory equipment, procedures, and services. This method most commonly uses an examination by the senses (sight, sound, smell, taste, or touch) to determine requirements compliance and may also rely on gauges or simple measures.

Verification by Analysis (A)

The analysis method verifies conformance to requirements based on studies, calculations, and modeling, or is based on the certified usage of similar components under identical or similar operating conditions (similarity). This method may consist of the technical evaluation of data using logic or mathematics to determine compliance with requirements. It is typically used in verification when a given attribute is impossible or extremely difficult to test, thereby enabling expansion of the verification beyond the range of the test. Review of software listings is considered to be verification by analysis.

Verification by Demonstration (D)

The demonstration method verifies the required operability of hardware and software by means that do not necessarily require the use of laboratory equipment, procedures, items or services. That is, compliance with requirements is verified by operation and function. More detail may be seen in MIL-HDBK-470 and MIL-STD-810. This method may be an un-instrumented test, with compliance determined by observation (e.g., maintenance task performance time). Verification by Test (T)

The test method verifies conformance to required performance/physical characteristics and design/construction features by instrumented functional operation and evaluation techniques through the use of laboratory equipment

procedures, items, and services. This method generally uses procedures and test/measuring equipment to verify compliance with requirements.

Redlines : <DELETED OBJECT>

IS : <DELETED OBJECT>

30.0-1

WAS :

Following is a list of the rules or protocols for the SOF data.

Usage Rules

- 1. The SOF always contains fields identifying creation date/time and reference date/time.
- 2. A new SOF is built each time a NANU is issued.

3. The latency of the SOF initially may be 15-20 minutes, and is driven by operational procedures and workload.

File Naming Convention

The most recently built SOF is given a standard name that contains the creation date/time and the file format version number, 'yyyy_ddd_hhmmss_vnn.sof', where yyyy is the year, ddd is the Jday (day of year starting with 1), hhmmss is the hour/minute/second UTC, and nn is the file format version number. The file format version number will increment sequentially whenever the file format changes.

Dissemination Methods

Unclassified Web Site. The GPSOC maintains a Web site accessible to unclassified users worldwide. The current SOF is posted at a conspicuous spot on this Web site for download.

Classification

The SOF is Unclassified and approved for public release. [Reference GPS Security Classification Guide, 30 Sep 2008, Topic Number 700.7.10]

Format

The SOF is formatted in XML according to the format below. The data type definition (DTD), the data format, and the data field definitions are provided.

A sample SOF with an internal DTD is as follows:

SOF DTD

<?xml version="1.0"?>

<!DOCTYPE GPSISFILE [

<!ELEMENT GPSISFILE (CREATION, REFERENCE, (PREDICTED | CURRENT | HISTORICAL)+)>

<!ELEMENT CREATION EMPTY>

<!ELEMENT REFERENCE EMPTY>

<!ELEMENT PREDICTED EMPTY>

<!ELEMENT CURRENT EMPTY>

<!ELEMENT HISTORICAL EMPTY>

<!ATTLIST GPSISFILE FILEID CDATA #FIXED "SOF"> <!ATTLIST GPSISFILE SYSID CDATA #FIXED "GPS"> <!ATTLIST GPSISFILE VERSION CDATA #REQUIRED> <!ATTLIST CREATION YEAR CDATA #REQUIRED> <!ATTLIST CREATION DOY CDATA #REQUIRED> <!ATTLIST CREATION HR CDATA #REQUIRED> <!ATTLIST CREATION MIN CDATA #REQUIRED> <!ATTLIST CREATION SEC CDATA #REQUIRED> <!ATTLIST REFERENCE YEAR CDATA #REQUIRED> <!ATTLIST REFERENCE DOY CDATA #REQUIRED> <!ATTLIST REFERENCE HR CDATA #REQUIRED> <!ATTLIST REFERENCE MIN CDATA #REQUIRED> <!ATTLIST REFERENCE SEC CDATA #REQUIRED> <!ATTLIST PREDICTED SVID CDATA #REQUIRED> <!ATTLIST PREDICTED SVN CDATA #REQUIRED> <!ATTLIST PREDICTED NAME (NANU|GOCGIS|USER DEFINED) #REQUIRED> <!ATTLIST PREDICTED TYPE (FCSTDV | FCSTMX) #REQUIRED> <!ATTLIST PREDICTED REFERENCE CDATA #REQUIRED> <!ATTLIST PREDICTED START YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED START DOY CDATA #REQUIRED> <!ATTLIST PREDICTED START_HR CDATA #REQUIRED> <!ATTLIST PREDICTED START_MIN CDATA #REQUIRED> <!ATTLIST PREDICTED START_SEC CDATA #REQUIRED> <!ATTLIST PREDICTED END_YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED END_DOY CDATA #REQUIRED> <!ATTLIST PREDICTED END HR CDATA #REQUIRED> <!ATTLIST PREDICTED END MIN CDATA #REQUIRED> <!ATTLIST PREDICTED END SEC CDATA #REQUIRED> <!ATTLIST CURRENT SVID CDATA #REQUIRED>

Page 60 of 73

<!ATTLIST CURRENT SVN CDATA #REQUIRED> <!ATTLIST CURRENT NAME (NANU|GOCGIS|USER_DEFINED) #REQUIRED> <!ATTLIST CURRENT TYPE CDATA #FIXED "UNUSUFN"> <!ATTLIST CURRENT REFERENCE CDATA #REQUIRED> <!ATTLIST CURRENT START_YEAR CDATA #REQUIRED> <!ATTLIST CURRENT START DOY CDATA #REQUIRED> <!ATTLIST CURRENT START_HR CDATA #REQUIRED> <!ATTLIST CURRENT START MIN CDATA #REQUIRED> <!ATTLIST CURRENT START_SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL SVID CDATA #REQUIRED> <!ATTLIST HISTORICAL SVN CDATA #REQUIRED> <!ATTLIST HISTORICAL NAME (NANU | GOCGIS | USER_DEFINED) #REQUIRED> <!ATTLIST HISTORICAL TYPE (FCSTSUMM|UNUSABLE|UNUNOREF) #REQUIRED> <!ATTLIST HISTORICAL REFERENCE CDATA #REQUIRED> <!ATTLIST HISTORICAL START YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL START DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL START HR CDATA #REQUIRED> <!ATTLIST HISTORICAL START MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL START SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL END_YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL END DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL END_HR CDATA #REQUIRED> <!ATTLIST HISTORICAL END_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL END_SEC CDATA #REQUIRED>

```
]>
```

```
SOF Structure
```

```
<?xml version="1.0"?>
```

```
<GPSISFILE FILEID="SOF" SYSID="GPS" VERSION="2">
```

```
<CREATION YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />
```

```
<REFERENCE YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />
```

```
SVID="9" SVN="39"
```

<CURRENT

/>

SVID="31" SVN="31"

```
NAME="NANU" TYPE="UNUSUFN" REFERENCE="2004101"
```

```
/>
```

```
START YEAR="2004" START DOY="257" START HR="5" START MIN="50" START SEC="0"
```

```
<HISTORICAL
```

```
SVID="27" SVN="27"
```

```
NAME="NANU" TYPE="UNUSABLE" REFERENCE="2004100"
```

NAME="NANU" TYPE="FCSTMX" REFERENCE="2004094"

```
START_YEAR="2004" START_DOY="242" START_HR="1" START_MIN="32" START_SEC="0"
```

START_YEAR="2004" START_DOY="229" START_HR="12" START_MIN="0" START_SEC="0"

END_YEAR="2004" END_DOY="230" END_HR="0" END_MIN="0" END_SEC="0"

```
END YEAR="2004" END DOY="243" END HR="19" END MIN="12" END SEC="0"
```

/>

</GPSISFILE>

All times are UTC TIME (ZULU) unless otherwise specified. DOY is day of year (same as JDAY); 1=1 January, 366 is valid for leap year

'GPSISFILE' FILE INFORMATION

Occurs once per file

FILEID is always 'SOF'

SYSID is always 'GPS'

VERSION is the version number of the file. The version text should be an integer version number. Example: 2

CREATION indicates date/time of file creation. Time is computer time (UTC time zone).

REFERENCE indicates date/time to which SOF data applies. For example, if January 10, 2003 1550Z is the REFERENCE time then Satellite Outage information will be collected up to and including that time, including past, current, and predicted information. The REFERENCE time is set to be the date/time of the most recent NANU incorporated into the SOF.

'SOF RECORD' INFORMATION

Occurs multiple times per file, once for each predicted, current or historical satellite outage issued by the REFERENCE data/time.

There are three types of SOF records.

PREDICTED identifies predicted outages as of the REFERENCE time.

CURRENT identifies any active outages as of the REFERENCE time, along with the time the outage began.

HISTORICAL identifies actual outages that have taken place prior to the REFERENCE time.

SVID - reusable identifier for each satellite in identified system. For GPS the SVID shall be the PRN.

SVN (Satellite Vehicle Number) – unique sequential number associated with satellite-specific program is an integer. For GPS this is assigned by the US Air Force.

PREDICTED record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU'). GOCGIS used when no NANU has been issued, yet outage is predicted or a GENERAL NANU has been issued that affects this outage.

TYPE – If NAME=NANU, then the choices are FCSTDV, FCSTMX. If a FCSTEXTD, then implemented as original type (FCSTDV or FCSTMX) with start date/time the same as in the FCSTEXTD and end date/time fixed twenty years out. If FCSTRESCD, then implemented as original type with dates/times as in the FCSTRESCD NANU. If a FCSTCANC type NANU is issued, the original type will be deleted from the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTDV issued with number 2003010, then REFERENCE=2003010. As another example, if there is a FCSTMX issued with number 2003047, followed be a FCSTEXTD with number 2003050, then REFERENCE=2003050.

CURRENT record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU').

TYPE – If NAME=NANU, then the choices are UNUSUFN and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as a UNUSUFN with the start date/time as 0000Z on the first day the satellite appears in the almanac.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a UNUSUFN issued with number 2003049, then REFERENCE=2003049.

HISTORICAL record fields

NAME – Alphanumeric indicator of outage source (currently NANU).

TYPE – If NAME=NANU, then the choices are FCSTSUMM, UNUSABLE, UNUNOREF, USABINIT, and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as an UNUSABLE with stop dates/times as in the USABINIT and the start date/time as 0000Z on the first day the satellite appears in the almanac. This closes out the UNUSUFN that was implemented earlier for the GENERAL launch message. If the NANU is initially issued as a GENERAL decommission it will be implemented in the SOF as an UNUSABLE with the decommission date/time as the end date/time. If a GENERAL NANU is issued which cancels a previous NANU, the previous NANU will not appear in the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTSUMM issued with number 2003051, then REFERENCE=2003051.

Format Changes

Changes to file formats are implemented as follows:

1. Files implementing a new format have the VERSION attribute of the GPSISFILE element incremented. Version 1 files encoded the file version in the filename. For example, a file with a previous format may have a name like 2004_202_145503_v01.sof. Later file versions encode the version both in the filename, and the XML VERSION attribute. The filenames of the new file versions look like 2004_202_145503_v02.sof.

2. If a new file format is implemented, both the old and the new file formats will be posted to the web site location for a transition period.

3. The old file format will be posted for six months, and then be removed. This provides time for users to adapt to the new file format.

4. Notifications of file format changes, with samples of the new format, will be published to <u>www.GPS.gov</u> when they are final.

Redlines :

Following is a list of the rules or protocols for the SOF data.

Usage Rules

- 1. The SOF always contains fields identifying creation date/time and reference date/time.
- 2. A new SOF is built each time a NANU is issued.
- 3. The latency of the SOF initially may be 15-20 minutes, and is driven by operational procedures and workload.

File Naming Convention

The most recently built SOF is given a standard name that contains the creation date/time and the file format version number, 'yyyy_ddd_hhmmss_vnn.sof', where yyyy is the year, ddd is the Jday (day of year starting with 1), hhmmss is the hour/minute/second UTC, and nn is the file format version number. The file format version number will increment sequentially whenever the file format changes.

Dissemination Methods

Unclassified Web Site. -The GPSOC maintains a Web site accessible to unclassified <u>military</u> users worldwide.- The current SOF is posted at a conspicuous spot on this Web site for download. <u>All other worldwide, civil users may download the</u> <u>SOF from the U.S Coast Guard Navigation Center Web site.</u>

Classification

The SOF is Unclassified and approved for public release. [Reference GPS Security Classification Guide, 30 Sep 2008, Topic Number 700.7.10]

Format

The SOF is formatted in XML according to the format below. The data type definition (DTD), the data format, and the data field definitions are provided.

A sample SOF with an internal DTD is as follows:

SOF DTD

<?xml version="1.0"?>

<!DOCTYPE GPSISFILE [

<!ELEMENT GPSISFILE (CREATION, REFERENCE, (PREDICTED | CURRENT | HISTORICAL)+)> <!ELEMENT CREATION EMPTY> <!ELEMENT REFERENCE EMPTY> <!ELEMENT PREDICTED EMPTY> <!ELEMENT CURRENT EMPTY> <!ELEMENT HISTORICAL EMPTY> <!ATTLIST GPSISFILE FILEID CDATA #FIXED "SOF"> <!ATTLIST GPSISFILE SYSID CDATA #FIXED "GPS"> <!ATTLIST GPSISFILE VERSION CDATA #REQUIRED> <!ATTLIST CREATION YEAR CDATA #REQUIRED> <!ATTLIST CREATION DOY CDATA #REQUIRED> <!ATTLIST CREATION HR CDATA #REQUIRED> <!ATTLIST CREATION MIN CDATA #REQUIRED> <!ATTLIST CREATION SEC CDATA #REQUIRED> <!ATTLIST REFERENCE YEAR CDATA #REQUIRED> <!ATTLIST REFERENCE DOY CDATA #REQUIRED> <!ATTLIST REFERENCE HR CDATA #REQUIRED> <!ATTLIST REFERENCE MIN CDATA #REQUIRED> <!ATTLIST REFERENCE SEC CDATA #REQUIRED> <!ATTLIST PREDICTED SVID CDATA #REQUIRED> <!ATTLIST PREDICTED SVN CDATA #REQUIRED> <!ATTLIST PREDICTED NAME (NANU|GOCGIS|USER_DEFINED) #REQUIRED> <!ATTLIST PREDICTED TYPE (FCSTDV | FCSTMX) #REQUIRED> <!ATTLIST PREDICTED REFERENCE CDATA #REQUIRED> <!ATTLIST PREDICTED START YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED START DOY CDATA #REQUIRED> <!ATTLIST PREDICTED START_HR CDATA #REQUIRED>

<!ATTLIST PREDICTED START_MIN CDATA #REQUIRED> <!ATTLIST PREDICTED START_SEC CDATA #REQUIRED> <!ATTLIST PREDICTED END_YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED END_DOY CDATA #REQUIRED> <!ATTLIST PREDICTED END HR CDATA #REQUIRED> <!ATTLIST PREDICTED END MIN CDATA #REQUIRED> <!ATTLIST PREDICTED END_SEC CDATA #REQUIRED> <!ATTLIST CURRENT SVID CDATA #REQUIRED> <!ATTLIST CURRENT SVN CDATA #REQUIRED> <!ATTLIST CURRENT NAME (NANU|GOCGIS|USER DEFINED) #REQUIRED> <!ATTLIST CURRENT TYPE CDATA #FIXED "UNUSUFN"> <!ATTLIST CURRENT REFERENCE CDATA #REQUIRED> <!ATTLIST CURRENT START_YEAR CDATA #REQUIRED> <!ATTLIST CURRENT START_DOY CDATA #REQUIRED> <!ATTLIST CURRENT START_HR CDATA #REQUIRED> <!ATTLIST CURRENT START MIN CDATA #REQUIRED> <!ATTLIST CURRENT START SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL SVID CDATA #REQUIRED> <!ATTLIST HISTORICAL SVN CDATA #REQUIRED> <!ATTLIST HISTORICAL NAME (NANU|GOCGIS|USER DEFINED) #REQUIRED> <!ATTLIST HISTORICAL TYPE (FCSTSUMM|UNUSABLE|UNUNOREF) #REQUIRED> <!ATTLIST HISTORICAL REFERENCE CDATA #REQUIRED> <!ATTLIST HISTORICAL START_YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL START_DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL START_HR CDATA #REQUIRED> <!ATTLIST HISTORICAL START_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL START SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL END YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL END DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL END_HR CDATA #REQUIRED>

All times are UTC TIME (ZULU) unless otherwise specified. DOY is day of year (same as JDAY); 1=1 January, 366 is valid

Occurs once per file

'GPSISFILE' FILE INFORMATION

```
FILEID is always 'SOF'
```

END_YEAR="2004" END_DOY="243" END_HR="19" END_MIN="12" END_SEC="0"

```
START_YEAR="2004" START_DOY="242" START_HR="1" START_MIN="32" START_SEC="0"
```

```
SVID="27" SVN="27"
```

NAME="NANU" TYPE="UNUSABLE" REFERENCE="2004100"

```
<HISTORICAL
```

```
/>
```

/>

</GPSISFILE>

for leap year

```
START YEAR="2004" START DOY="257" START HR="5" START MIN="50" START SEC="0"
```

```
NAME="NANU" TYPE="UNUSUFN" REFERENCE="2004101"
```

```
SVID="31" SVN="31"
```

```
<CURRENT
```

```
/>
```

```
END_YEAR="2004" END_DOY="230" END_HR="0" END_MIN="0" END_SEC="0"
```

```
START_YEAR="2004" START_DOY="229" START_HR="12" START_MIN="0" START_SEC="0"
```

```
NAME="NANU" TYPE="FCSTMX" REFERENCE="2004094"
```

```
SVID="9" SVN="39"
```

```
<PREDICTED
```

```
<REFERENCE YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />
```

```
<CREATION YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />
```

```
<GPSISFILE FILEID="SOF" SYSID="GPS" VERSION="2">
```

```
<?xml version="1.0"?>
```

```
SOF Structure
```

```
]>
```

<!ATTLIST HISTORICAL END_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL END SEC CDATA #REQUIRED>

SYSID is always 'GPS'

VERSION is the version number of the file. The version text should be an integer version number. Example: 2

CREATION indicates date/time of file creation. Time is computer time (UTC time zone).

REFERENCE indicates date/time to which SOF data applies. For example, if January 10, 2003 1550Z is the REFERENCE time then Satellite Outage information will be collected up to and including that time, including past, current, and predicted information. The REFERENCE time is set to be the date/time of the most recent NANU incorporated into the SOF.

'SOF_RECORD' INFORMATION

Occurs multiple times per file, once for each predicted, current or historical satellite outage issued by the REFERENCE data/time.

There are three types of SOF records.

PREDICTED identifies predicted outages as of the REFERENCE time.

CURRENT identifies any active outages as of the REFERENCE time, along with the time the outage began.

HISTORICAL identifies actual outages that have taken place prior to the REFERENCE time.

SVID - reusable identifier for each satellite in identified system. For GPS the SVID shall be the PRN.

SVN (Satellite Vehicle Number) – unique sequential number associated with satellite-specific program is an integer. For GPS this is assigned by the US Air Force.

PREDICTED record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU'). GOCGIS used when no NANU has been issued, yet outage is predicted or a GENERAL NANU has been issued that affects this outage.

TYPE – If NAME=NANU, then the choices are FCSTDV, FCSTMX. If a FCSTEXTD, then implemented as original type (FCSTDV or FCSTMX) with start date/time the same as in the FCSTEXTD and end date/time fixed twenty years out. If FCSTRESCD, then implemented as original type with dates/times as in the FCSTRESCD NANU. If a FCSTCANC type NANU is issued, the original type will be deleted from the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTDV issued with number 2003010, then REFERENCE=2003010. As another example, if there is a FCSTMX issued with number 2003047, followed be a FCSTEXTD with number 2003050, then REFERENCE=2003050.

CURRENT record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU').

TYPE – If NAME=NANU, then the choices are UNUSUFN and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as a UNUSUFN with the start date/time as 0000Z on the first day the satellite appears in the almanac.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a UNUSUFN issued with number 2003049, then REFERENCE=2003049.

HISTORICAL record fields

NAME – Alphanumeric indicator of outage source (currently NANU).

TYPE – If NAME=NANU, then the choices are FCSTSUMM, UNUSABLE, UNUNOREF, USABINIT, and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as an UNUSABLE with stop dates/times as in the USABINIT and the start date/time as 0000Z on the first day the satellite appears in the almanac. This closes out the UNUSUFN that was implemented earlier for the GENERAL launch message. If the NANU is initially issued as a GENERAL decommission it will be implemented in the SOF as an UNUSABLE with the decommission date/time as the end date/time. If a GENERAL NANU is issued which cancels a previous NANU, the previous NANU will not appear in the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTSUMM issued with number 2003051, then REFERENCE=2003051.

Format Changes

Changes to file formats are implemented as follows:

1. Files implementing a new format have the VERSION attribute of the GPSISFILE element incremented. Version 1 files encoded the file version in the filename. For example, a file with a previous format may have a name like 2004_202_145503_v01.sof. Later file versions encode the version both in the filename, and the XML VERSION attribute. The filenames of the new file versions look like 2004_202_145503_v02.sof.

2. If a new file format is implemented, both the old and the new file formats will be posted to the web site location for a transition period.

3. The old file format will be posted for six months, and then be removed. This provides time for users to adapt to the new file format.

4. Notifications of file format changes, with samples of the new format, will be published to <u>www.GPS.gov</u> when they are final.

IS :

Following is a list of the rules or protocols for the SOF data.

Usage Rules

- 1. The SOF always contains fields identifying creation date/time and reference date/time.
- 2. A new SOF is built each time a NANU is issued.

3. The latency of the SOF initially may be 15-20 minutes, and is driven by operational procedures and workload.

File Naming Convention

The most recently built SOF is given a standard name that contains the creation date/time and the file format version number, 'yyyy_ddd_hhmmss_vnn.sof', where yyyy is the year, ddd is the Jday (day of year starting with 1), hhmmss is the hour/minute/second UTC, and nn is the file format version number. The file format version number will increment sequentially whenever the file format changes.

Dissemination Methods
Unclassified Web Site. The GPSOC maintains a Web site accessible to unclassified military users worldwide. The current SOF is posted at a conspicuous spot on this Web site for download. All other worldwide, civil users may download the SOF from the U.S Coast Guard Navigation Center Web site.

Classification

The SOF is Unclassified and approved for public release. [Reference GPS Security Classification Guide, 30 Sep 2008, Topic Number 700.7.10]

Format

The SOF is formatted in XML according to the format below. The data type definition (DTD), the data format, and the data field definitions are provided.

A sample SOF with an internal DTD is as follows:

SOF DTD

<?xml version="1.0"?>

<!DOCTYPE GPSISFILE [

<!ELEMENT GPSISFILE (CREATION, REFERENCE, (PREDICTED | CURRENT | HISTORICAL)+)>

<!ELEMENT CREATION EMPTY>

<!ELEMENT REFERENCE EMPTY>

<!ELEMENT PREDICTED EMPTY>

<!ELEMENT CURRENT EMPTY>

<!ELEMENT HISTORICAL EMPTY>

<!ATTLIST GPSISFILE FILEID CDATA #FIXED "SOF">

<!ATTLIST GPSISFILE SYSID CDATA #FIXED "GPS">

<!ATTLIST GPSISFILE VERSION CDATA #REQUIRED>

<!ATTLIST CREATION YEAR CDATA #REQUIRED>

<!ATTLIST CREATION DOY CDATA #REQUIRED>

<!ATTLIST CREATION HR CDATA #REQUIRED>

<!ATTLIST CREATION MIN CDATA #REQUIRED>

<!ATTLIST CREATION SEC CDATA #REQUIRED>

<!ATTLIST REFERENCE YEAR CDATA #REQUIRED>

<!ATTLIST REFERENCE DOY CDATA #REQUIRED>

<!ATTLIST REFERENCE HR CDATA #REQUIRED>

<!ATTLIST REFERENCE MIN CDATA #REQUIRED>

<!ATTLIST REFERENCE SEC CDATA #REQUIRED>

<!ATTLIST PREDICTED SVID CDATA #REQUIRED> <!ATTLIST PREDICTED SVN CDATA #REQUIRED> <!ATTLIST PREDICTED NAME (NANU|GOCGIS|USER_DEFINED) #REQUIRED> <!ATTLIST PREDICTED TYPE (FCSTDV | FCSTMX) #REQUIRED> <!ATTLIST PREDICTED REFERENCE CDATA #REQUIRED> <!ATTLIST PREDICTED START YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED START DOY CDATA #REQUIRED> <!ATTLIST PREDICTED START HR CDATA #REQUIRED> <!ATTLIST PREDICTED START_MIN CDATA #REQUIRED> <!ATTLIST PREDICTED START SEC CDATA #REQUIRED> <!ATTLIST PREDICTED END_YEAR CDATA #REQUIRED> <!ATTLIST PREDICTED END_DOY CDATA #REQUIRED> <!ATTLIST PREDICTED END_HR CDATA #REQUIRED> <!ATTLIST PREDICTED END_MIN CDATA #REQUIRED> <!ATTLIST PREDICTED END SEC CDATA #REQUIRED> <!ATTLIST CURRENT SVID CDATA #REQUIRED> <!ATTLIST CURRENT SVN CDATA #REQUIRED> <!ATTLIST CURRENT NAME (NANU|GOCGIS|USER DEFINED) #REQUIRED> <!ATTLIST CURRENT TYPE CDATA #FIXED "UNUSUFN"> <!ATTLIST CURRENT REFERENCE CDATA #REQUIRED> <!ATTLIST CURRENT START YEAR CDATA #REQUIRED> <!ATTLIST CURRENT START_DOY CDATA #REQUIRED> <!ATTLIST CURRENT START_HR CDATA #REQUIRED> <!ATTLIST CURRENT START_MIN CDATA #REQUIRED> <!ATTLIST CURRENT START_SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL SVID CDATA #REQUIRED> <!ATTLIST HISTORICAL SVN CDATA #REQUIRED> <!ATTLIST HISTORICAL NAME (NANU|GOCGIS|USER DEFINED) #REQUIRED> <!ATTLIST HISTORICAL TYPE (FCSTSUMM|UNUSABLE|UNUNOREF) #REQUIRED> <!ATTLIST HISTORICAL REFERENCE CDATA #REQUIRED>

```
NAME="NANU" TYPE="UNUSABLE" REFERENCE="2004100"
```

```
SVID="27" SVN="27"
```

<HISTORICAL

/>

START_YEAR="2004" START_DOY="257" START_HR="5" START_MIN="50" START_SEC="0"

NAME="NANU" TYPE="UNUSUFN" REFERENCE="2004101"

SVID="31" SVN="31"

<CURRENT

/>

END_YEAR="2004" END_DOY="230" END_HR="0" END_MIN="0" END_SEC="0"

START_YEAR="2004" START_DOY="229" START_HR="12" START_MIN="0" START_SEC="0"

NAME="NANU" TYPE="FCSTMX" REFERENCE="2004094"

SVID="9" SVN="39"

<PREDICTED

<REFERENCE YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />

<CREATION YEAR="2004" DOY="257" HR="11" MIN="2" SEC="11" />

<GPSISFILE FILEID="SOF" SYSID="GPS" VERSION="2">

<?xml version="1.0"?>

SOF Structure

]>

<!ATTLIST HISTORICAL START_YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL START_DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL START_HR CDATA #REQUIRED> <!ATTLIST HISTORICAL START_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL START_SEC CDATA #REQUIRED> <!ATTLIST HISTORICAL END_YEAR CDATA #REQUIRED> <!ATTLIST HISTORICAL END_DOY CDATA #REQUIRED> <!ATTLIST HISTORICAL END_HR CDATA #REQUIRED> <!ATTLIST HISTORICAL END_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL END_MIN CDATA #REQUIRED> <!ATTLIST HISTORICAL END_SEC CDATA #REQUIRED>

```
START_YEAR="2004" START_DOY="242" START_HR="1" START_MIN="32" START_SEC="0"
```

```
END_YEAR="2004" END_DOY="243" END_HR="19" END_MIN="12" END_SEC="0"
```

/>

</GPSISFILE>

All times are UTC TIME (ZULU) unless otherwise specified. DOY is day of year (same as JDAY); 1=1 January, 366 is valid for leap year

'GPSISFILE' FILE INFORMATION

Occurs once per file

FILEID is always 'SOF'

SYSID is always 'GPS'

VERSION is the version number of the file. The version text should be an integer version number. Example: 2

CREATION indicates date/time of file creation. Time is computer time (UTC time zone).

REFERENCE indicates date/time to which SOF data applies. For example, if January 10, 2003 1550Z is the REFERENCE time then Satellite Outage information will be collected up to and including that time, including past, current, and predicted information. The REFERENCE time is set to be the date/time of the most recent NANU incorporated into the SOF.

'SOF_RECORD' INFORMATION

Occurs multiple times per file, once for each predicted, current or historical satellite outage issued by the REFERENCE data/time.

There are three types of SOF records.

PREDICTED identifies predicted outages as of the REFERENCE time.

CURRENT identifies any active outages as of the REFERENCE time, along with the time the outage began.

HISTORICAL identifies actual outages that have taken place prior to the REFERENCE time.

SVID - reusable identifier for each satellite in identified system. For GPS the SVID shall be the PRN.

SVN (Satellite Vehicle Number) – unique sequential number associated with satellite-specific program is an integer. For GPS this is assigned by the US Air Force.

PREDICTED record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU'). GOCGIS used when no NANU has been issued, yet outage is predicted or a GENERAL NANU has been issued that affects this outage.

TYPE – If NAME=NANU, then the choices are FCSTDV, FCSTMX. If a FCSTEXTD, then implemented as original type (FCSTDV or FCSTMX) with start date/time the same as in the FCSTEXTD and end date/time fixed twenty years out. If FCSTRESCD, then implemented as original type with dates/times as in the FCSTRESCD NANU. If a FCSTCANC type NANU is issued, the original type will be deleted from the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTDV issued with number 2003010, then REFERENCE=2003010. As another example, if there is a FCSTMX issued with number 2003047, followed be a FCSTEXTD with number 2003050, then REFERENCE=2003050.

CURRENT record fields

NAME – Alphanumeric indicator of outage source (currently 'NANU').

TYPE – If NAME=NANU, then the choices are UNUSUFN and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as a UNUSUFN with the start date/time as 0000Z on the first day the satellite appears in the almanac.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a UNUSUFN issued with number 2003049, then REFERENCE=2003049.

HISTORICAL record fields

NAME – Alphanumeric indicator of outage source (currently NANU).

TYPE – If NAME=NANU, then the choices are FCSTSUMM, UNUSABLE, UNUNOREF, USABINIT, and GENERAL. If NANU is initially issued as a GENERAL launch message, then it will be implemented in the SOF as an UNUSABLE with stop dates/times as in the USABINIT and the start date/time as 0000Z on the first day the satellite appears in the almanac. This closes out the UNUSUFN that was implemented earlier for the GENERAL launch message. If the NANU is initially issued as a GENERAL decommission it will be implemented in the SOF as an UNUSABLE with the decommission date/time as the end date/time. If a GENERAL NANU is issued which cancels a previous NANU, the previous NANU will not appear in the SOF.

REFERENCE – reference info. If NAME=NANU this will be the NANU number of the last valid NANU associated with this outage. For example, if there is a FCSTSUMM issued with number 2003051, then REFERENCE=2003051.

Format Changes

Changes to file formats are implemented as follows:

1. Files implementing a new format have the VERSION attribute of the GPSISFILE element incremented. Version 1 files encoded the file version in the filename. For example, a file with a previous format may have a name like 2004_202_145503_v01.sof. Later file versions encode the version both in the filename, and the XML VERSION attribute. The filenames of the new file versions look like 2004_202_145503_v02.sof.

2. If a new file format is implemented, both the old and the new file formats will be posted to the web site location for a transition period.

3. The old file format will be posted for six months, and then be removed. This provides time for users to adapt to the new file format.

4. Notifications of file format changes, with samples of the new format, will be published to <u>www.GPS.gov</u> when they are final.