PROPOSED INTERFACE REVISION NOTICE (PIRN)

Note: This Cover Page is not intended for signature. It is to be used during the document update (pre-ICWG) process.

Affected ICD/IS: IS-GPS-705D	**PIRN Number:** PIRN-IS-705D-004
Authority: RFC-00318	**PIRN Date:** 17-JUN-2016

CLASSIFIED BY: NA

DECLASSIFY ON: NA

Document Title: Navstar GPS Space Segment/User Segment L5 Interfaces

Reason For Change (Driver):

Modify public documents to clarify extraneous, ambiguous, redundant, or missing editorial and/or administrative information to enhance the public document quality (clear and concise communication) as suggested by Public Interface Control Working Group (ICWG) participants, stakeholders and key members.

Description of Change: Process the administrative and editorial changes as requested by stakeholders and update IS-GPS-705D.

Prepared By: Drew Sapp/Huey Nguyenhuu **Checked By: Perry Chang**

IS705-1497 :

WAS :
A 6-bit value of "000000" in the PRN_a field shall indicate that no further Status Words are contained in the remainder of the data block. In this event, all subsequent bits in the data block field shall be filler bits, i.e., alternating ones and zeros beginning with one.

IS :
A 6-bit value of "000000" in the PRNa field shall indicate that ~~no further Status~~there ~~Words~~is ~~are~~no ~~contained~~data in the~~ remainder of~~ ~~the~~reduced ~~data~~almanac ~~block~~packet. In this event, all subsequent bits ~~in~~to the ~~data~~end ~~block~~of ~~field~~the message that contains the packet shall be filler bits, i.e., alternating ones and zeros beginning with one.

IS705-313 :

WAS :

Table 20-VI. Reduced Almanac Parameters				
Parameter*****	No. of Bits	Scale Factor (LSB)	Effective Range **	Units
δ_A ***	8 *	2^{+9}	**	meters
Ω_0	7 *	2^{-6}	**	semi-circles
Φ_0 ****	7 *	2^{-6}	**	semi-circles

* Parameters so indicated shall be two's complement with the sign bit (+ or -) occupying the MSB;

** Effective range is the maximum range attainable with indicated bit allocation and scale factor;

*** Relative to A_{ref} = 26,559,710 meters;

**** Φ_0 = Argument of Latitude at Reference Time = $M_0 + \omega$;

***** Relative to following reference values:

$e = 0$

δ_i = +0.0056 semi-circles (i = 55 degrees)

$\dot{\Omega}$ =-2.6 x 10^{-9} semi-circles/second

IS :

Table 20-VI. Reduced Almanac Parameters*****				
Parameter	No. of Bits	Scale Factor (LSB)	Valid Range **	Units
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IS705-332 :

WAS :

Table 20-IX. UTC Parameters

Parameter Symbol	Parameter Description	No. of Bits**	Scale Factor (LSB)	Effective Range***	Units
A_{0-n}	Bias coefficient of GPS time scale relative to UTC time scale	16*	2^{-35}		Seconds
A_{1-n}	Drift coefficient of GPS time scale relative to UTC time scale	13*	2^{-51}		sec/sec
A_{2-n}	Drift rate correction coefficient of GPS time scale relative of UTC time scale	7*	2^{-68}		sec/sec^2
Δt_{LS}	Current or past leap second count	8*	1		seconds
t_{ot}	Time data reference Time of Week	16	2^4	604,784	seconds
WN_{ot}	Time data reference Week Number	13	1		weeks
WN_{LSF}	Leap second reference Week Number	8	1		weeks
DN	Leap second reference Day Number	4****	1		days
Δt_{LSF}	Current or future leap second count	8*	1		seconds

* Parameters so indicated shall be two's complement with the sign bit (+ or -) occupying the MSB;
** See Figure 20-6 for complete bit allocation
*** Unless otherwise indicated in this column, effective range is the maximum range attainable with indicated bit allocation and scale factor;
**** Right justified.

IS :

Table 20-IX. UTC Parameters

Parameter Symbol	Parameter Description	No. of Bits**	Scale Factor (LSB)	Valid Range***	Units
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Δt_{LSF}	Current or future leap second count	8*	1		seconds

* Parameters so indicated shall be two's complement with the sign bit (+ or -) occupying the MSB;
** See Figure 20-6 for complete bit allocation
*** Unless otherwise indicated in this column, valid range is the maximum range attainable with indicated bit allocation and scale factor;
**** Right justified.

IS705-1477 :

WAS :
The t_{oe} shall be equal to the toc of the same CNAV data set. The following rules govern the transmission of toe and t_{oc} values in different data sets: (1) The transmitted t_{oc} will be different from any value transmitted by the SV during the preceding seven days; (2) The transmitted t_{oe} will be different from any value transmitted by the SV during the preceding six hours.

Cutovers to new data sets will occur only on hour boundaries except for the first data set of a new upload. The first data set may be cut-in (reference paragraph 20.3.4.1) at any time during the hour and therefore may be transmitted by the SV for less than one hour.

The start of the transmission interval for each data set corresponds to the beginning of the curve fit interval for the data set. Each data set remains valid for the duration of its transmission interval, and nominally also remains valid for the duration of its curve fit interval. A data set is rendered invalid before the end of its curve fit interval when it is superseded by the SV cutting over to the first data set of a new upload.

Normal Operations. The message type 10, 11, and 30-37 data sets are transmitted by the SV for periods of two hours. The corresponding curve fit interval is three hours.

IS :
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Cutovers to new data sets will occur only on hour boundaries except for the first data set of a new upload. The first data set may be cut-in (reference paragraph 20.3.4.1) at any time during the hour and therefore may be transmitted by the SV for less than one hour.

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