

Global Positioning Systems (GPS) Directorate

2017 Public Interface Control Working Group (ICWG) Forum Meeting Minutes

Date: 06 September 2017
Meeting Time: 0830 – 1630 HRS (Pacific Time)
Location: PCT Facility (100 N. Sepulveda Blvd El Segundo, CA 90245), Bldg. 100
Dial In: 1-310-653-2663; Meeting ID: 7536629 Passcode: 000001
DCS: <https://conference.apps.mil/webconf/gpspublicmeeting>
Meeting started: 0830 HRS (Pacific Time)
Meeting ended: 1300 HRS (Pacific Time)

Agenda:

Day 1 (Public ICWG) – 06 September 2017

Opening Remarks

Roll Call

Agenda Overview

Meeting Logistics / Rules of Engagement

Meeting Purpose

- RFC-349: 2017 Public Document Clean-Up
- RFC-351: ICD-GPS-240/ICD-GPS-870 Admin Changes
- RFC-352: Update ICD-GPS-240 and ICD-GPS-870 for NANU Issuance
- RFC-354: Leap Second and EOP (Earth Orientation Parameters) Synchronization

BREAK

Action Item Review

- 2017
- Past years

Day 2 (Public Forum) – 07 September 2017

Reconvene

Roll Call

Action Item Review Continued (if necessary)

Special Topic Presentations

- Delta from 2016 PICWG RFC-312, Definition Clarification for Time of Predict
- GPS IIR-M and IIF L2C Phase Noise Plot Addition to IS-GPS-200 as References
- IS-GPS-200H URA Wording Clarification (briefed by Aerospace Corp.)
- Open Discussion Session

Action Item Review

Adjourn

Opening Remarks:

The GPE Chief Engineer welcomed all parties to this year's PICWG. There are lots of changes that have occurred. Cyber awareness is foremost in these changes with cyber hardening, proceeding apace. Even so, it was re-iterated that service to the civilian sector will not be hampered. If the public perceives this otherwise, they were encouraged to let us know. Discussed that today we will be reviewing technical changes to those documents that are in the public domain. It was mentioned that some military technical changes, such as M-Code, are being made to ensure that GPS signals are not jeopardized. Even so, it was emphasized that civilian access will not be impacted through this implementation for military users.

Logistical concerns were discussed by the Public ICWG Chair/Lead as well as the purpose for this year's PICWG. How to submit a concern was briefed as well as the process for changing a document, current baseline, and suggested changes.

RFC-349, 2017 Public Document Clean-up

This is standard procedure for each PICWG to go over a RFC that encompasses document clean-up (e.g., administrative changes and/or typographical errors). There was only one substantive comment that was received and accepted. The RE went over the proposed change in the document (IS-705). There were no substantial discussion, either on-line or otherwise.

RFC-351, ICD-GPS-240/ICD-GPS-870 Admin Changes

This RFC is about administrative changes only with respect to the United States Coast Guard (USCG) and not about any Operational Advisories (OA) as previously intended. Gave an explanation of why section 1 of the OA was not removed or modified for 2017 PICWG (per SMC/GPE direction) and a new set of PIRNs were released (documents: ICD-GPS-240/870). The OA will be discussed the following year. The group was solicited for comments if there is any concern with this format. Any comments received would be discussed next year.

RFC-352, Update ICD-GPS-240 and ICD-GPS-870 for NANU Issuance

The purpose of this RFC was to provide requirement clarification of the Notice Advisory to Navstar Users (NANU). Current wording could be misinterpreted and lead to the delay of NANU issuance which would not be aligned with the GPS Standard Positioning Service Performance Standard (SPSPS). There was no discussion and/or comments.

RFC-354, Leap Second and EOP [Earth Orientation Parameters] Synchronization

IS 200 and IS 700 documents are affected. Went over comments and proposed changes to text. May have to reassess (Action Item: 2017, RFC354-01, Aerospace Corporation) the legibility of a single change related to the placement of dot over which character, there could be some confusion in reading the equations. There was no other discussion or comments. There was a deferred comment from the Aerospace Corporation that will be carried forward to next year's PICWG.

Action Item Review

2017: See RFC-354 above.

2014: Discussed items for closure and/or for deferral.

2015: Discussed items for closure, put on-hold, etc. There was some discussion with respect to AI 2015-01. This was a pending action. Assessment needs to be done and will be accomplished, no-longer on hold/pending action. Change management process will be begin shortly for next year's PICWG RFCs.

For AI 2015-11 (Integrity Failure), there was some discussion of what an integrity failure is (provided by the Aerospace Corporation SME) and how often it occurs (rare occurrence). It is not always immediately apparent and usually after an analysis has been accomplished. Based on the discussion, it was closed.

Went over comments from Thales Group, the French representative on-line. One comment will be entertained for change (AI 15-41) and must be submitted by Oct of this year. However, at a Post-ICWG discussions among GPE personnel and Aerospace, the public will not be permitted to comment on the SPS PS document. GPE's new approach will be captured in PRAT (reference e-mail, subject, "Stand-by...RE: Public inquiry" [via GPS.gov], 19Sept17). AI 2017-02, post for public submissions (and if the public would like to submit concerns, remind them), the time to submit by Oct of this year for next year's PICWG. These following AIs will be evaluated as how to process and/or address them (as concerns, issues, etc.) for next year's PICWG. (For further explanation of these and other AIs, refer to the Action Item Review tables that follow later in these minutes.)

- AI15-43: Remains open and there will be follow-up with the French representative with respect to integrity/SIS. Five outstanding questions remain. Could be closed by next year's PICWG.
- AI2017-03: Had no GPS Public Requirements Accountability Tool (PRAT) AI# assigned originally to it. Considered a good catch (by the Aerospace Corporation SME) and will be addressed/assessed with answer to the French representative.
- AI2017-04: Had no PRAT AI# and concerns CEI data set (IS-705). More exploration is necessary and would be discussed at next year's PICWG.

- AI2017-05: LNAV Message. Must be explored, an excellent comment. Also had no AI# assigned to it.
- AI2017-06: CNAV Almanac. Another excellent comment and will be addressed for next year's PICWG.
- AI2017-07: Based upon Mr. Bouvet's Slide #15, open up a new RFC and combine with Special Topic RFC for PICWG 2108 (if possible).
- AI2017-08: Remains open. Will be addressed in a special topic in how to change the specification. It will be considered for the change management process.

2016: Went over AIs for closure. For AI16-08, there was discussion whether it was addressed in RFC-348. If so, it could be closed, pending confirmation from the USCG.

AI16-20: Remains open with respect to up-revs. The usual rule of up-rev is after the fifth IRN. Issue was raised that since PICWGs are only once a year, there should be an exception. This is to ensure the correct document is reviewed and not having to review numerous IRNs to determine the content of the document. An internal discussion will be accomplished to address this and thus, remains open.

AI16-25: Remains open.

AI16-26: There is no further consideration/need from the FAA and is recommended for closure.

Continuation with Day 2 Agenda: Since time permitted, the Public ICWG Chair/Lead had decided to press on with the Day 2 Agenda (The Public ICWG was successfully completed a half-day instead of two days as previously planned).

Special Topics:

RFC-312, Definition Clarification for Time for Predict

Discussed at last year's PICWG. Affected three documents and had three IRNs. It was CCB'd approved as of 12Jun17. Changes were discussed/presented. No questions or concerns were expressed.

GPS IIR-M and IIF L2C Phase Noise Plot Addition to IS-GPS-200 as Reference

Based upon an action taken for RFC-267, "L5 and L1C Phase Noise Plot". The plots are of no value and do not drive design. As such, they do not belong in the interface specification. Requested closure. There's was no discussion, and action was closed.

IS-GPS-200H URA Wording Clarification

Special topic was presented by the Aerospace Corporation SME and accomplished real-time suggested/proposed changes during this presentation. L1 and L2 corrections were made. Version of changes suggested will be captured for a proposed RFC for next year's PICWG.

Closing Remarks:

Drove home the notion for making changes in an expeditious manner. Any proposed changes for next year's PICWG should be submitted in the workflow as presented.

Attendance List:

Name	Organization	E-mail	Present	On-line
Alversado, Liberty	Engility/SE&I		X	
Bouvet, Denis	Thales Group (France)			X
Brown, Steven A	Lockheed Martin		X	
Bylander, Shawn	Engility/SE&I		X	
Chen, Chen-Tsing	Aerospace Corporation		X	
Czopek, Frank	Microcosm Inc		X	
Dobyne, John				X
Fabian, Frank	US Army SOSEI			X
Fischer, John	Orolia/Spectra can		X	
Ford, Cheryl A	AFLCMC/WNY PNT-			X
Godwin, Daniel	GPE		X	
Hamilton, Richard	U.S. Coast Guard			X
Hill, Stephan M	Aerospace Corporation			X
Horejsi, James R	GPE		X	
Ji, Jenny W Maj	GPEP			
Kapila, Ma	SEPTENTRIO		X	
Kasper, John A	Engility/SE&I		X	
Kastenholtz, Anne	Boeing			X
Kawakami, Todd M.	GPD		X	
Kim, Willis	Mitre		X	

Name	Organization	E-mail	Present	On-line
Kovach, Karl	Aerospace Corporation		X	
Lanctot, Michael	Engility/SE&I		X	
Miles, Calvin	FAA		X	
Museheski, John				X
Naick, Purvis D.	GPC			
Nguyen, Ha	GPC		X	
Nguyenhuu, Huey	Engility/SE&I		X	
Okerson, Gary	Mitre		X	
Owen	Borden Consulting for NATO NEIA			X
Parker, Joel	NASA			X
Patel, Amit	Engility/SE&I		X	
Patel, Ashish B	GPGX		X	
Prieto, Alex	GPGX			X
Renfro, Brent	University of Texas		X	
Ruch, Rebecca	U.S. Coast Guard			X
Salazar, Jose	Sandia			X
Semwal, Indira	Mitre		X	
Slattery, Rhonda	Aerospace Corporation		X	
Stein, Miquela	ARLUT			
Tomaszewski, John E.	GPV3		X	
Van Roekel, Robert Capt	GPE		X	

Action Item Review:

Year	Action Item #	Action	Notes	Action Taken
2014	17	Closing	Resolved via RFC 308	
	18	Closing	Resolved via RFC 308	
	19	Closing	Resolved via RFC 308	
	24	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) Delete phrase	
	26	Deferred	Deferring until there is a better answer from PRN expansion group	AI 2014-26: Remain open in PRAT
	28	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo)	
	29	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) ACTION ITEM - AI 15-28	
	30	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo)	PRAT 2016 Action Items.pdf
	31	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo)	PICWG_2015_2016_2017_Thales AI_Concern_w/Mr. Bouvet's Responses Sep 5 2017.pdf
	32	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) Pre OP pp is missing	
	33	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo)	
	34	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) IS 200 P-Code	
	35	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) Change 3.3.2.2	
	36	Closing	Resolved via RFC 318 (not 308 as noted in second half of sentence, this is a typo) Change 3.3.2.2	
	45	Closing	Merged with 2014-26 Change 3.3.2.2	

Year	Action Item #	Action	Notes	Action Taken
2015	1	New	Open new RFC for discussion on this topic; don't want to update ICDs with wrong #s; Mr. Kovach recommending to remove UTC performance #s, can discuss at TIMs On Hold for tech Baseline. Restructure ICDs and Specs - Scare People Merge AF 15 and 16 (RFC-266)	Need to submit a new concern 9/12. 1) Assess all performance parameters 2) If they are included in the SPS, then remove these applicable parameters from the ICD(s) to prevent mismatches.
	11	Closing	Close with answer of NOT adding Integrity Failure Notice; After discussion, Mr. Kovach in agreement with Mr. Renfro that there is no current need for public users; if issue comes up in future we can address it then Add Integrity failure to NANU Propose to PICWG - (Caution) OPEN (Closed)	
	15	Closing	Resolved via RFC 308	
	16	Closing	Merged with 2015-01	Include this AI w/ -01
	39	Closing	No further comments RFC-354 - Probable	
	40	Closing	No further comments	
	41	Closing	Post to public on GPS.gov that if they have comments they can submit them by October 31st; IS-GPS-200	OBE due to GPE and Aerospace discussions. Will not be done and therefore, it is close. Post a request on GPS.gov (Request comments/inputs NLT Oct 31) _ Capt Van Roekel
	42	Closing	No further comments	
	43	New	Leaving 43 open with action for Mr. Kovach to follow-up with Mr. Bouvet's question; Can be resolved/closed next year; FYI question will be addressed in Appendix D of IS-GPS-705	OPEN. Touch base w/ Mr. Kovach and get back to Mr. Bouvet. Need to submit a new concern 9/12.
	44	Closing	No further comments CMV only Procession	
	Bouvet Slide #10	New	Need to send clarifying response to Mr. Bouvet; great question, Mr. Kovach will be responding?; should be entered in PRAT T2 Interim	Page 10 PDF file. AI 2017 - 03 (Open a new concern as needed)

Year	Action Item #	Action	Notes	Action Taken
2015	47	Closing	Resolved via RFC 318 Public doc cleanup	2016-47
	Bouvet Slide #12	New	Mr. Bouvet proposes to delete sentence; Mr. Kovach says no; Open new RFC to discuss; needs to be entered in PRAT Reconfirm	AI 2017-4 review and combine w/ Special topic RFC for 2018 if possible (Open a new concern as needed)
	Bouvet Slide #13	New	Open new RFC via comments from Mr. Bouvet; needs to be entered in PRAT	AI 2017-5 review and combine w/ Special topic RFC for 2018 if possible (Open a new concern as needed)
	Bouvet Slide #14	New	Open new RFC via comments from Mr. Bouvet; needs to be entered in PRAT ACTION ITEM - IS-GPS-3703	AI 2017-6 review and combine w/ Special topic RFC for 2018 if possible.
	Bouvet Slide #15	New	Open new RFC (to Mr. Kovach); needs to be entered in PRAT Section 20.3.3.4 - Tammy Sharp to OPEN up RFC for this	AI 2017-7 review and combine w/ Special topic RFC for 2018 if possible (Open a new concern as needed)
	Bouvet Slide #16	New	Open new RFC; will remain open until changes are made for IS200; action will be presented in PICWG special topic today 20.3.3.3.1.3 - Definition of UVA - Redlines	AI 2017-8 review and combine w/ Special topic RFC for 2018 if possible (Open a new concern as needed)
	46	Closing	Discussed as special topic for PICWG 2017; Closing after presentation ACTION ITEM - Carrier Phase Noise	Mr. Nguyenhuu to submit the responses to CM to close out the CCB RFC-268 AI

Year	Action Item #	Action	Notes	Action Taken
2016	1	Closing	Resolved via RFC 308	
	2	Closing	Resolved via RFC 308	
	3	Closing	Resolved via RFC 308	
	4	Closing	Remaining comments addressed with RFC 351	recommend to be closed at 2018 PICWG
	5	Closing	Resolved via RFC 308	
	6	Closing	Resolved via RFC 308	
	7	Closing	Resolved via RFC 308	
	8	Closing	Proposing closure upon completion of action; CWO Ruch will post notification with new file formats available; also check spelling for CWO Ruch in PRAT for this AI can be accessed via the following link: https://smclivelink.losangeles.af.mil/Livelink/llisapi.dll/open/59959963 RFC-308 - Slide 53	
	9	Closing	Resolved via RFC 308 RFC-308 - Slide 53	
	10	Closing	Resolved via RFC 308 RFC-308 - Slide 53	
	11	Closing	Resolved via RFC 312	
	12	Closing	Resolved via RFC 312 RFC-312 - Slide 20	
	13	Closing	Resolved via RFC 312 RFC-312 - Final Roll up	
	14	Closing	Resolved via RFC 312	
	15	Closing	Resolved via RFC 312: Slide- 69-17	
	16	Closing	Resolved via RFC 312: Slide- 69-17	
	17	Closing	Resolved via RFC 312: Slide- 69-17	
	18	Closing	Resolved via RFC 312: Slide- 69-17	

Year	Action Item #	Action	Notes	Action Taken
2016	19	Closing	Resolved via RFC 318	
	20	New	PICWG document up-rev rules different than policy of up-revving after every 5th IRN; need to discuss protocol; to Mr. Nguyenhuu/Ms. Alversado (both of GPS SE&I); Leave open until comments are addressed; Mr. Brown (LM) expressed concerns about releasing IRNs without revisioned baseline documents; Mr. Godwin (GPEPR) will see if he can get up-rev completed and posted before PICWG (?) Uprev - Slide 96-104	Open - check w/ Management on the new policy
	21	Closing	Resolved via RFC 318 Uprev - Slide 96-104	
	22	Closing	Resolved via RFC 318 Uprev - Slide 96-104	
	23	Closing	Resolved via RFC 318 Uprev - Slide 96-104	
	24	Closing	George Farmer resolved w/ 2SOps and Coast Guard	
	25	Open	RFC-351 - OPEN until next year.	recommend to be closed at 2018 PICWG
	26	Closing	In regards to special topic from PICWG 2016 for changing IS705, Mr. Nguyen took proposal and coordinated with FAA/DOT; recommended closure on account of GPS Directorate not involved w/weather so GPC not looking to pursue this topic DOT - Higher Level	
	47	Closing	previously discussed in Bouvet slides; resolved via RFC 318	
	48	Closing	Resolved via RFC 318	

Year	Action Item #	Action	Notes	Action Taken
Other	During PICWG 2017	New	In regards to slide #75 from PICWG 2017 Slides, Mr. Chang is to assess if dot is visible in actual document; Mr. Renfro & Dr. Slattery expressed concerns	DOT on the U AI-2017 -01. Address in RFC-354 IRN.
	RFC-267	Closing	Use GPS II R-M and II F L2C Noise Plots for User Reference in IS-GPS-200 DECISION: Will not include Phase Noise CLOSED	Officially closed this action in 2017 Public ICWG (Sep 6)
	2017-01	Closing	The legibility of a single change related to the placement of Dot over which character	Taken care of post PICWG
	2017-02	New	Post for public submissions	GPE will provide path/directions in GPS.gov
	Mr. Bouvet's Slide #16 (2015)	Walk-on	URA account for LNAV and L1P(Y) and L2P(Y) and DUAL FREQ P(Y) Users Remove Single FREQ L1 C/A and L1/L5 Users RFC for 2018	SPS baselined version in GPS.gov (4th edition) is on GPS.gov. Confirmed. A part of Mr. Bouvet's Comments. (Open a new concern as needed)