Public Review of Preliminary Change Notices (PCN) Read Me

22-OCT-2024

DOCUMENT CLASSIFICATION
DOCUMENTS: UNCLASSIFIED

REQUEST FOR CHANGE (RFC) NUMBER
RFC-519

RFC TITLE
Civil Integrity Support Message (ISM) Formats

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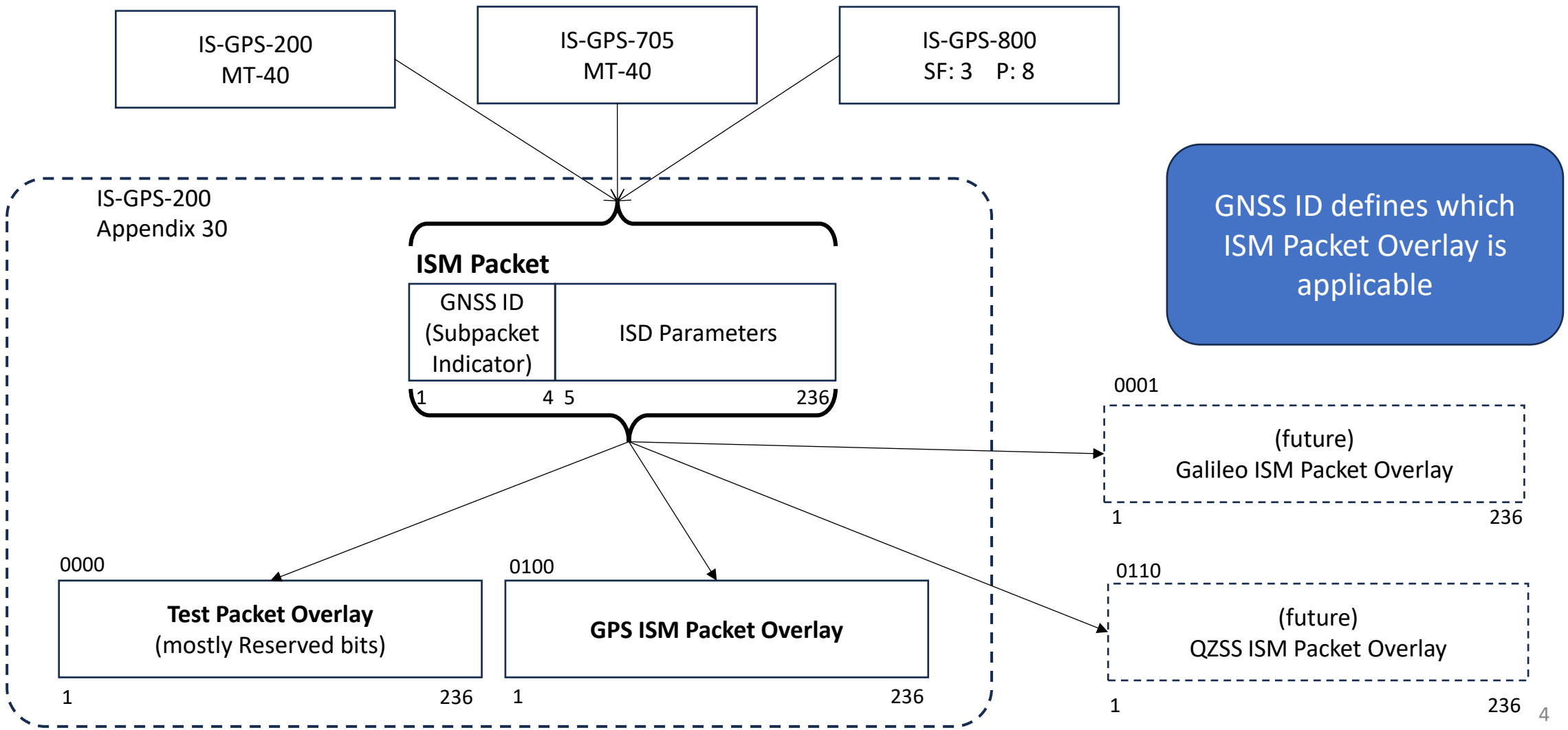
Purpose

- Purpose of RFC-519 Civil Integrity Support Message (ISM) Formats
  - This Request For Change (RFC) implements the portion of the Advanced Receiver Autonomous Integrity Monitoring (ARAIM) function that specifies the message formats in GPS civil signals that support the implementation of ARAIM.
  - The rest of the GPS portion of the ARAIM function will be implemented with a future RFC.
  - This RFC modifies the original work placed in the GPS Requirements Baseline by RFC-413 and it has improved on work from RFC-495 and RFC-502 that did not make it into the requirements baseline.

Major Changes

- This RFC changed the design of the ISM message in two major ways
  1. Eliminated document duplicate information
     - The three GPS Signal In Space (SiS) documents had almost identical information replicated among the three documents. Now IS-GPS-705 (the L5 document) and IS-GPS-800 (the L1C document) refer to IS-GPS-200 (our main civil SiS document) for all duplicate information. IS-GPS-705 and IS-GPS-800 have been greatly shortened on the subject of ISM.
     - The major outcome of this effort is a 236-bit ISM Packet that is common among all the ISM messages and pages on GPS civil signals
  2. Provides for future cross-dissemination of ISM data from different Global Navigation Satellite System (GNSS) constellations
     - At this time, the GPS civil SiS documents only detail a GPS ISM Packet format and the Test data ISM Packet format
     - However, if and when GPS forms agreements with other GNSS constellations to have their ISM data broadcast on GPS civil signals, their detailed ISM packet information will be an easy drop-in
     - A graphical depiction showing the hierarchy of documents, messages and ISM Packets is on the next slide

Document / Data Structure Hierarchy



Files for Review

- The RFC-519 Public Review Package consists of 11 Files
- Only the three PCN files constitute the official review
- If you have comments, send them back to the GPS program in the supplied CRM file to SSC.CG.PICWG@spaceforce.mil
- The 6 Draft UpRev files are not part of the official review, but they can help the reader more easily see the changes in context with each other. These Draft UpRevs are truncated so they only show the parts of each SiS document around where the ISM and ARAIM changes are being made. Each of the three SiS documents has a Draft UpRev showing redlines and a Draft UpRev showing the proposed final text without redlines.

List of Files

No.	File Name	Purpose
1	RFC-519 Read Me First	This file
2	RFC-00519 CRM Template.xlsx	Use this this Comment Resolution Matrix (CRM) file format to email back your comments
3	PCN-IS-200N_RFC519_yyyymmdd	Official Changes Proposed for “NAVSTAR GPS Space Segment/Navigation User Segment Interfaces”
4	PCN-IS-705J_RFC519_yyyymmdd	Official Changes Proposed for “NAVSTAR GPS Space Segment/Navigation User Segment L5 Interfaces”
5	PCN-IS-800J_RFC519_yyyymmdd	Official Changes Proposed for “NAVSTAR GPS Space Segment/Navigation User Segment L1C Interfaces”
6	Draft_UpRev_IS-GPS-200N+003+RFC-00519_Partial_yyyymmdd	IS-GPS-200N Review aid as proposed final text
7	Draft_UpRev_IS-GPS-200N+003+RFC-00519_Partial_Redlines_yyyymmdd	IS-GPS-200N Review aid as proposed redlines
8	Draft_UpRev_IS-GPS-705J+003+RFC-00519_Partial_yyyymmdd	IS-GPS-705J Review aid as proposed final text
9	Draft_UpRev_IS-GPS-705J+003+RFC-00519_Partial_Redlines_yyyymmdd	IS-GPS-705J Review aid as proposed redlines
10	Draft_UpRev_IS-GPS-800J+003+RFC-00519_Partial_yyyymmdd	IS-GPS-800J Review aid as proposed final text
11	Draft_UpRev_IS-GPS-800J+003+RFC-00519_Partial_Redlines_yyyymmdd	IS-GPS-800J Review aid as proposed redlines