CGSIC 2019
September 16-17, 2019
Hyatt Regency Miami
Miami, Florida

All meeting material is posted to
www.gps.gov/cgsic/meetings/2019
GPS Week Number Rollover

• Extensive public outreach
  • CGSIC Bulletins
  • Broadcast Notice to Mariners
  • US Air Force guidance/recommendations
  • DHS guidance/recommendations
• Government coordinated testing to test equipment readiness for WNRO
  • US Air Force
  • DHS
  • Equipment manufacturers
NOTE: The Global Positioning System Directorate has approved a change to the Navstar GPS Control Segment to User Support Community Interfaces (ICD-GPS-240 and ICD-GPS-870) which will remove GPS satellite plane/slot and clock information from the Operational Advisory message. This change proposal was approved by the GPS Interface Control Working Group in December of 2018. SVN/PRN, Block Type, and NANU details will continue to be included.

A depiction of the GPS constellation of satellites with slot and plane designations is provided here as an easy to read graphic for use by the GPS user community.

GPS CONSTELLATION STATUS FOR 09/03/2019

<table>
<thead>
<tr>
<th>Plane</th>
<th>Slot</th>
<th>SVN</th>
<th>PRN</th>
<th>Block-Type</th>
<th>Clock</th>
<th>Outage Date</th>
<th>Nanu-Type</th>
<th>Nanu-Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>65</td>
<td>24</td>
<td>IIF</td>
<td>CS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>2</td>
<td>52</td>
<td>31</td>
<td>IIR-M</td>
<td>RB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>64</td>
<td>30</td>
<td>IIF</td>
<td>RB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Slant Chart (GPS Satellite Locations)

Including GPS III SV01 as SVN 74

SPACE AND MISSILE SYSTEMS CENTER

Authorized GPS Testing

• Planned, authorized government GPS testing has seen:
  • 32% annual increase since 2015
  • More diverse locations nationwide
  • Extended testing periods
• Continue to coordinate approvals and publicize authorized testing
April 2019 GPS Problem Reports

- Insufficient Information, 3
- ICD Violation, 3
- Mapping Issue, 4
- Unknown Interference, 40
- User Equipment, 35

**OCONUS (32)**
- Maritime (28)
  - Egypt (9)
  - Malta/Libya (9)
  - China (5)
  - Yemen
  - Lebanon
  - Ukraine
  - Cyprus
  - Greece
- Land (4)
  - Germany
  - Spain
  - India
  - Brazil

**CONUS (8)**
- Maritime (5)
  - Mobile, AL (4)
  - Pensacola, FL
- Land (3)
  - Abilene, TX
  - Carson City, NV
  - Puerto Rico

17 appeared related to Week Number Rollover
### GPS Problem Reports Status

CIVIL GPS Users are encouraged to submit reports of GPS problems to NAVCEN. A form to submit reports can be found on our GPS Problem Reporting webpage. Some information from those reports is shared here along with input from interagency partners and the most likely cause of the report.

Descriptions for each of the fields is at the bottom of the page.

* Fields are as provided by the reporting source and are unedited.

<table>
<thead>
<tr>
<th>Date/Time of Disruption</th>
<th>Date Submitted</th>
<th>Location</th>
<th>Type</th>
<th>Description</th>
<th>Cause</th>
<th>NAVCEN Date Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/04/2019 12:00am Mountain Standard Time</td>
<td>11/21/2019</td>
<td>Mesa</td>
<td>Transportation</td>
<td>USER: I have had a disruption to all of my mail service. I do not know if there was a recent update to the GPS system. I have ordered packages from 4 different sources 2 of which I previously ordered from and had no issues. For some reason the Unit number sometimes shown in forms as Apartment is not coming up correctly and all of my packages are being returned. One of the companies I ordered from told me that the Unit number is showing as part of the street address. Was there a recent update that is causing this. I have had no problems with delivery up until the first of November. NAVCEN: User provided information on how to contact mapping software providers to update their location details.</td>
<td>Mapping Issue</td>
<td>11/27/2019</td>
</tr>
<tr>
<td>10/22/2019 10:00 CST</td>
<td>11/12/2019</td>
<td>many US locations</td>
<td>Transportation</td>
<td>USER: Provides Telematics devices to the Transportation industry. We use GPS to provide location data for commercial vehicles and leverage this to enable Electronic Logging Devices for them to work correctly and record drivers hours of service information to ensure they are compliant. We had many devices working correctly. Then suddenly on October 22 2019 we started losing GPS position data and this has been sporadic ever since. Logs showed that there were 13 SAT in view. But the data said zero satellites tracked. This has not been seen before. What event occurred that</td>
<td>User Equipment</td>
<td>11/27/2019</td>
</tr>
</tbody>
</table>
Use of AIS for Marine Investigations

Houston Pleasure Craft/Sailing Vessels

Chesapeake Bay Entrance
Waterways Risk Assessment and Support Division

- Traffic Statistics for PAWSA
- General GIS Support for Waterways issues.
Maritime Traffic and Tracking Analysis Division

- **Our team are maritime geographic information system (GIS) experts and information analysts**
- **We turn the data in the NAIS database into useful information for the CG and maritime community**
  - Create tailored reports of archived AIS traffic data
  - Support everything from academic studies to casualty investigations to legal claims
- **We ensure the data integrity of the NAIS database**
  - Help the maritime public to report accurately and we aid in compliance efforts
  - Systematically comb and correct the data as it becomes part of the historical public record
- **We approve interagency and public requests for NAIS information**
  - Handle the FOIA requests
  - Screen agencies’ request to establish AIS live feeds
Maritime Traffic and Tracking Analysis Division

AIS for Marine Pollution Surveillance applications

Marine Pollution Surveillance Report (MPSR)

UNCONFIRMED AS OIL

CONFIDENCE: Medium-High

Possible Oil

Possible Thicker Oil

Suspected Oil Source

4.26 km² Total Area of Possible Oil

AREA/BLOCK: NA

REMARKS:
Possible oil was observed in satellite imagery. The anomaly was unconfirmed as oil. The anomaly was segmented, measured 14.4 m in the SW-NE direction, and appeared to be attached to a moving point source. The anomaly also crossed over the international water boundary. Measured winds at the time of observation were 15 kts and from the E. Confidence was determined to be Medium-High given the anomaly’s association with a point source article when progressing a continued to its background surroundings.

UNCERTAINTIES:
Unknown of the material producing the signature in the satellite image. The anomaly did not possess sharp edges and may be a result of weathering or strong ocean currents in the area.

ANALYST: DOLL

For further information on oil spill response and assessment go to: https://response.noaa.gov/oil/guidance and choose spill response spills.

Coordinate System: OCS WGS 1984
Datum: WGS 1984
Date: 02/20/2023

25.125 0
25.125 2.5 Nautical Miles

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CGSIC 2019
September 21-22, 2020
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St Louis, Missouri
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