

May 2, 2023, Prep. Day Member & Guest Priorities (1)

Theme 1: Expand PNT EXCOM Structure & Pursue a Genuine Whole-of-Government Approach to PNT

- Expand the PNT EXCOM structure and process to better the whole-of-government approach.
- We've been mired down in discussions about who pays for what, and in meantime other service providers have surpassed us. For example, we were the last ones to get operational SAR payloads on GPS. We were the last ones to get SAR payloads on. I think it's a structural problem. We need a more centralized authority.
- There is an opportunity to provide a more systemic approach towards GPS applications. However, for that to happen we need to let application developers contribute to setting the standards of what GPS should do.

Theme 2: Deploy Software Upgradable GPS Satellites

- We should really look at deploying software upgradable GPS satellites and replacing existing GPS satellites. While expensive, this is a fraction of the cost we're incurring as a nation on issues such as car accidents, an area we can improve through vehicle communication.
- As noted earlier, we need more flexibility to change the signals broadcast by GPS.
- Agree on the software defined radio issue. If we maintain the current 30-year cycle to implement new signals, we'll quickly fall behind other GNSS.

Theme 3: Invest more in PNT Training & Address Future Shortage in U.S. Geodesists

- We need to invest more in PNT education and training. Recommend we commission a study to identify the size of the required workforce, and then identify the gaps. We also need to expand the GNSS curriculum at U.S. universities and encourage both industry and international (particularly with Europe) partnerships.
- I support the recommendation on education.
- We need to reverse the trend regarding training of future geodesists in the U.S.

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Theme 4: Improve Funding for GPS and to Assist Agencies to Address Vulnerabilities

- Unfunded mandates are costing industry tens of millions in funding as it tries to protect GPS users. The USG should help with this cost.
- We have a huge opportunity with upcoming 50th anniversary to up our ante, culminating with a White House summit. It's important that the summit focus on the positive of GPS, what it means to our economy and the world, and discuss the funding needed to keep GPS as the gold standard.
- If the whole-of-government believes our infrastructure is at risk, then we should spend time, money, and focus to eliminate those weaknesses in our system.
- The USG needs to ensure GPS remains the gold standard, and this will require a change of paradigm in how we invest in GPS, especially the DoD.

Theme 5: Ensure GPS Remains the International Gold Standard

- The USG should regain global U.S. PNT leadership as part of containing China and protecting Taiwan.
- We need more clarity on the USG long-term plans for future development of PNT systems.
- I echo the sentiment of regaining US leadership. When talking to industry and users worldwide, the perception is that GPS is not being innovated as other GNSS systems are.

Theme 6: Transition from spectrum allocation process run by a single regulatory agency to a genuine whole-of-government approach

- Key priority should be to transition USG from a spectrum allocation process run by a single regulatory agency to a genuine whole-of-government approach.
- I second the recommendation on spectrum protection.

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Theme 7: Implement GPS HARS

- USG should add a GPS High Accuracy and Robustness Service (HARS), using the internet, like other GNSS are doing.
- I support the recommendation made by Frank about a GPS HARS Service.

Theme 8: Improve User Awareness to Vulnerabilities, including the Provision of an Estimate of the Likelihood of GPS Service Not Being Available

- We need to improve the public and GNSS user awareness of PNT technology, including its vulnerability.
- USG should provide an estimate of the likelihood that GPS signals are available so the user community can better plan how to invest on backups and/or alternative PNT approaches.

Theme 9: Pursue a National PNT Strategy Including Non-Radionavigation PNT

- We need a broader National PNT Architecture that is not constrained to only space-based PNT.
- There is a federal radionavigation plan with specific requirements for GPS. I propose to remove “radio” from that so that we can also include non-radio navigation systems.