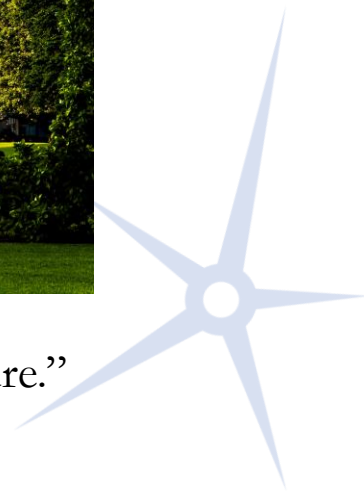


National Resilient Timing Architecture



“GPS is still a single point of failure.”



PNT Advisory Board

2010 – Complement PNT

2014 – Complement PNT

2018 – Complement Timing

Congress

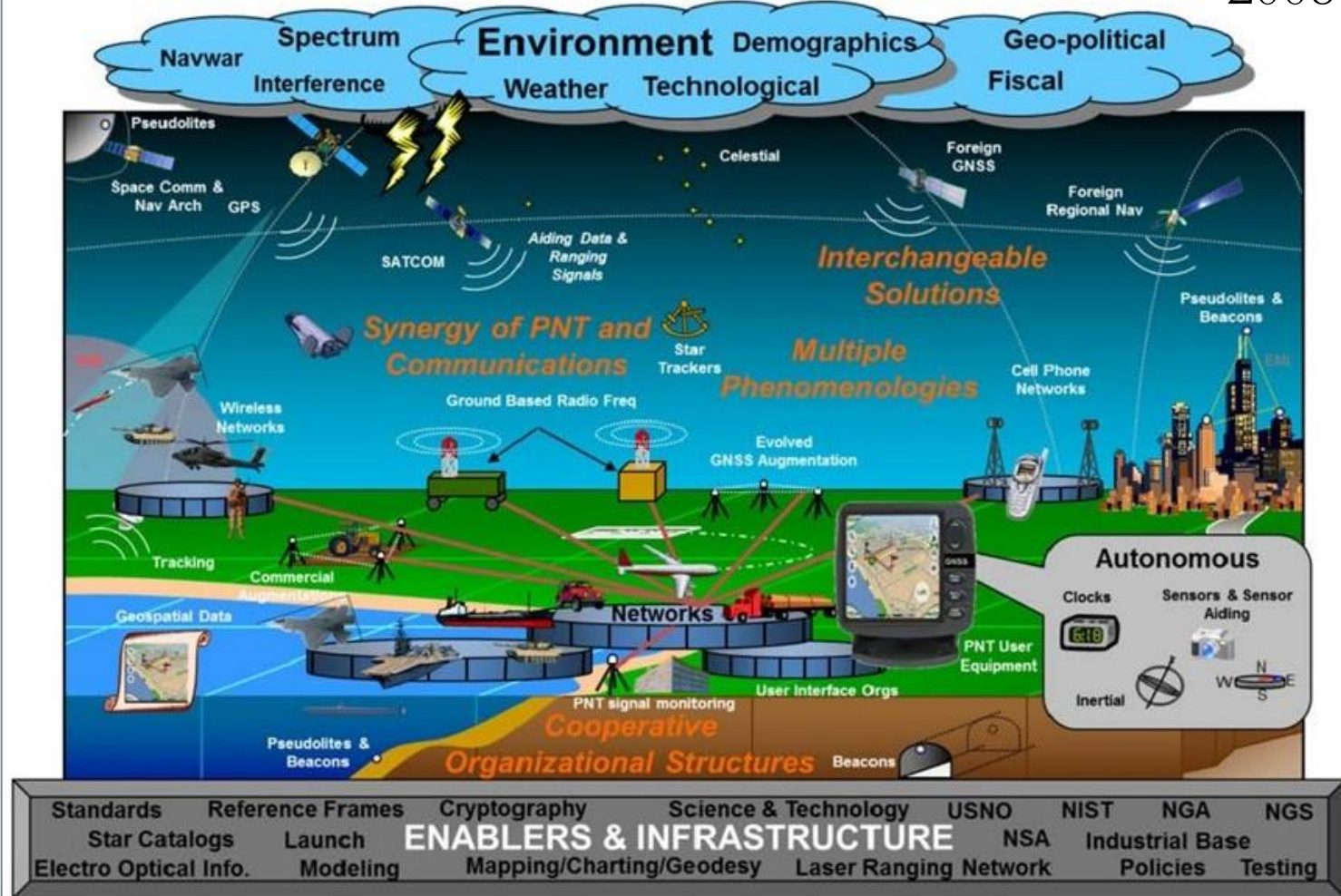
2018 – Complement Timing

NSTAC

2021 – Complement Timing

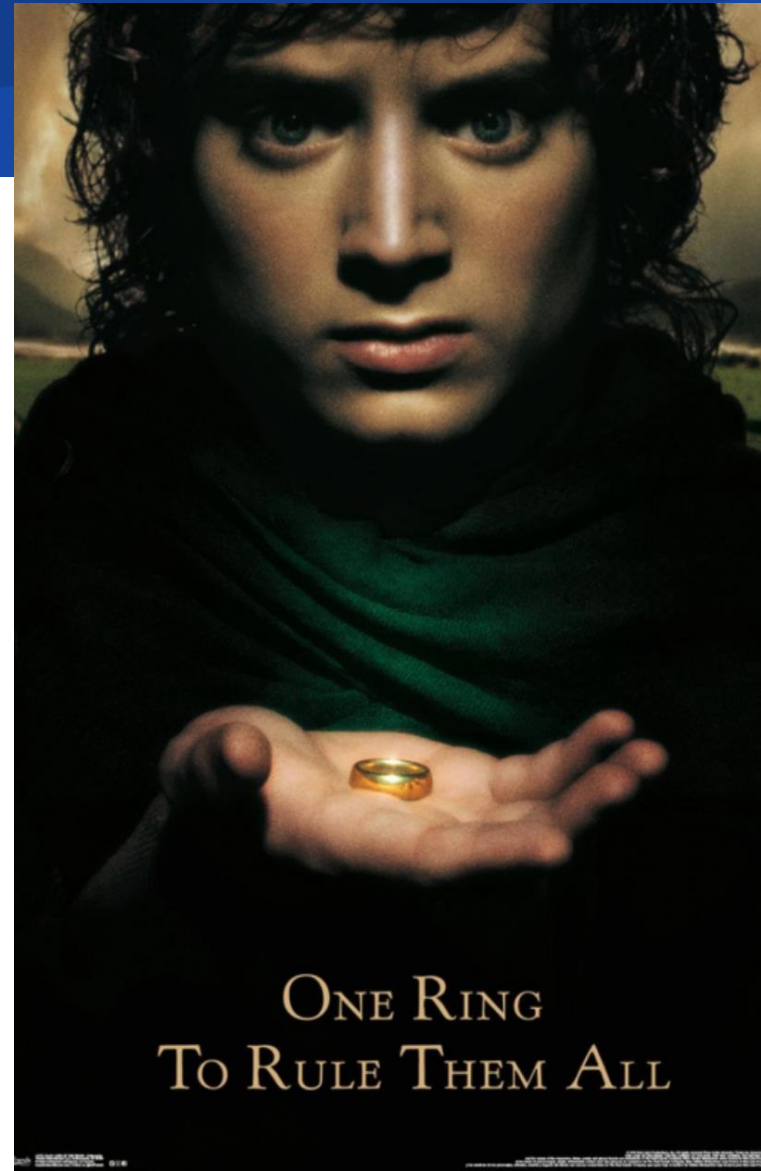
National PNT Architecture

2008



P & N & T

Timing is everything.



Posterun



GPS is expensive, more backups not needed

GPS (therefore PNT) is a DOD thing

More time delivery is not a govt responsibility

“The Market” will provide enough alternatives

We have to solve the adoption issue.



Policy Recommendation

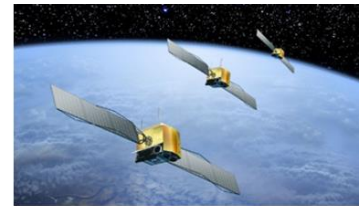
- Implement diverse delivery of timing as widely as possible
- Work for adoption as widely as possible
 - Including free to users

May 5, 2022

The President's National Space-based Positioning, Navigation,
and Timing Advisory Board

Policy Recommendation

Implement a National Resilient Timing
Architecture



Draft Proposed 5 May 2022



Policy Goals

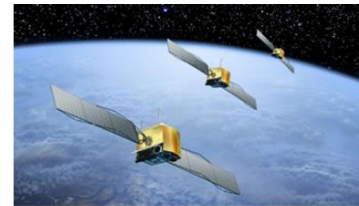
- “Get the bullseye off GPS”
 - Satellites, signals much less attractive targets
- Protect USA against the unthinkable
- Support tech & competitiveness

May 5, 2022

The President’s National Space-based Positioning, Navigation,
and Timing Advisory Board

Policy Recommendation

Implement a National Resilient Timing
Architecture



Draft Proposed 5 May 2022



National PNT Advisory Board – Draft/Proposed Finding and/or Recommendation

- **Title of Recommendation:** Implement a National Resilient Timing Architecture
- **Finding:**
 - GPS is a single point of failure – Per National Security Council
 - Little reason for users to adopt other services/systems if they are not free – Per DHS
- **Recommendation:**
 - **Immediately implement a National Resilient Timing Architecture to make multiple diverse sources of timing to as broad a section of the public as possible.**
 - **Actively encourage adoption of the architecture’s non-GNSS PNT services as widely as possible. This includes making these services available at no cost to users.**
- **Rationale for Recommendation:** See paper provided
 - Get the bullseye off GPS
 - Protect America from catastrophe
 - Support tech development and competitiveness
- **Consequences of No Action on the Recommendation:**
 - Unacceptable risk from hostile action, accident, coronal mass ejection
 - America held hostage by hostile threats to GPS, foreign policy options constrained

