



Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington DC 20515

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March 1, 2021

The Honorable Rob Fairweather
Acting Director
Office of Management and Budget
725 17th St., NW
Washington, DC 20503

Dear Acting Director Fairweather,

We urge the new Administration to establish a Federal backup for Global Positioning System's (GPS) timing signal at the earliest possible time. The previous three Administrations have failed to accomplish this goal, and we hope President Biden's Administration will finally make this important telecommunication infrastructure system protection a reality. Without this GPS signal, it is not a question of if our transportation, financial, and telecommunications infrastructure systems will fail, it is a question of when.

These signals are critical for our current and future transportation systems, telecommunications, and overall economy. Unfortunately, GPS satellites and signals are vulnerable to a wide variety of threats, both natural and man-made.¹ At the same time, many of our adversaries would suffer far less from a loss of the GPS signal. Russia and China, for example, have established backup systems to help protect their citizens, economies, and military forces when signals from space are disrupted.²

Establishment of a backup signal will make users much less likely to experience failure of their system due to GPS interference. Such a signal will improve transportation safety, as well as benefiting rapidly evolving new technologies such as autonomous and intelligent transportation systems (ITS) and 5G telecommunications. For example:

- Safety – In 2019 interference with GPS signals nearly led to a commercial passenger aircraft crashing into a mountain.³ Drone accidents⁴ and white hat hackers forcing cars in auto-drive

¹ "DHS Believes our Reliance on GPS is a National Security Risk" Vice, December 13, 2020.

² See "Russia's navigation plan reveals fear of jamming" C4ISRNET, April 20, 2020, and *see also* "China Expanding Loran as GNSS Backup" GPS World, October 12, 2020.

³ "Callback" Issue 473, June 2019 (NASA).

⁴ See UK AAIB Bulletin 7/2020, pg. 27, case AAIB-26314.

off the road⁵ have also shown the dangers of relying solely on GPS for navigation and timing.

- Autonomy/ITS – Timing signals are critical transportation infrastructure. They support wireless network synchronization, event time stamping, and reinforce location applications. A weak timing infrastructure hobbles autonomy and ITS development.
- 5G & Future Telecommunications – The telecommunications industry technical group, Alliance for Telecommunications Industry Solutions (ATIS), has long identified the vulnerability of GPS timing as a major problem and called for a national solution.⁶ Implementing resilient and precise timing called for will allow faster 5G implementation and enable it to reach more Americans.

In January of this year, the Department of Transportation (DOT) completed a report⁷ detailing the kinds of systems required to ensure America always has the timing services it needs. These systems will also help users easily weather minor disruptions and provide a solid infrastructure for development of future technologies.

Thank you for your attention to this important and very long overdue issue. If you have any questions or need more information, please contact John Clark Rayfield, Republican Staff Director, Subcommittee on Coast Guard and Maritime Transportation (john.rayfield@mail.house.gov).

Sincerely,



Sam Graves
Ranking Member



Bob Gibbs
Ranking Member
Subcommittee on Coast Guard and
Maritime Transportation

⁵“Tesla Model S and Model 3 vulnerable to GNSS spoofing attacks”, GPS World, June 28, 2019, *available at* <https://www.gpsworld.com/tesla-model-s-and-model-3-vulnerable-to-gnss-spoofing-attacks/>.

⁶ “GPS Vulnerability,” ATIS Technical Report ATIS 0900005.

⁷ “Complementary PNT and GPS Backup Technologies Demonstration Report,” DOT-VNTSC-20-07, January 2021.