THE ROLE OF POSITIONING, NAVIGATION, AND TIMING IN CRITICAL INFRASTRUCTURE

In an ever-evolving landscape, multi-Positioning, Navigation and Timing (PNT) ecosystem attack surfaces are larger; the incorporation of PNT dependencies into future technologies are increasingly interdependent; and the scale of impacts are more widespread and longer-lasting. This is why it is more critical than ever that the U.S. government focus on improving resiliency to PNT threats. Accurate and precise PNT information is vital to the nation's Critical Infrastructure (CI). The GPS Equipment Testing for Critical Infrastructure (GET-CI) test series is part of the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) PNT Program's collaborative efforts designed to help industry partners test and evaluate their technologies to become more resilient against PNT disruptions.

OUTREACH AND ENGAGEMENT

DHS S&T announced an opportunity for Critical Infrastructure Owners & Operators (CI O&O) and Global Positioning System (GPS) equipment manufacturers to test their equipment against GPS disruption and spoofing.

Typical commercial testing and data collection are limited to laboratory environments. This event provides an opportunity for CI O&O and manufacturers of commercial GPS receivers used in CI to perform equipment evaluations in a rarely available live-sky spoofing and jamming environment.

MITIGATING POTENTIAL VULNERABILITY

Prior DHS S&T vulnerability testing, in both laboratory and live-sky environments, found tested GPS receivers to be vulnerable to jamming and spoofing to varying degrees. While typical commercial testing and data collection are limited to laboratory environments, this event provides a unique environment for manufacturers of commercial GPS receivers used in CI, as well as CI O&O, the opportunity to perform equipment evaluations in a rarely available live-sky spoofing environment.

INFRASTRUCTURE RESILIENCY

Continuing the GET-CI series of live-sky events, this activity aims to raise end-user vulnerability awareness and allow equipment manufacturers to evaluate how their equipment performs in real-world conditions.

ACCOMPLISHMENTS

- Request for Information for Participation published: 9/15/2023
- Draft Cooperative Research and Development Agreement approved: 9/29/2023
- CI O&O applications received: 10/20/2023
- Participants interviewed and selected: Q2 FY24

UPCOMING MILESTONES

- Test Event: Q3 FY25
- Final Test Report: To Be Determined

IDENTIFY PERFORMERS/PARTNERS

Partners: DHS Cybersecurity and Infrastructure Security Agency, DHS Enterprise, and other federal agencies

Performers: Homeland Security Systems Engineering and Development Institute™ Federally Funded Research and Development Center, MITRE Corp.

Stakeholders: Department of Transportation, Space Force, GPS equipment manufacturers, PNT technology providers, CI O&O, industry groups, and federal civilian agencies.