

Unusual US PNT Advisory Board* meeting produces many recommendations

A report by Dana Goward representing the Resilient Navigation and Timing Foundation (Member of IAIN)

The 6 August meeting of the United States Space-based Positioning, Navigation and Timing Advisory Board was unusual for several reasons.

First, it was a departure from the board's normal semi-annual spring and fall meeting schedule. At its meeting in May the board was unable to finalize several recommendations and did not want to delay delivery of its work to the administration until its scheduled meeting in December. Hence, this intersessional meeting.

Also, the meeting was the group's first to be held virtually (on-line and telephonically). Board members from locations in the US, Switzerland, Australia, Egypt, Norway, and Mexico participated. As you can guess, many did so at an unusual hour of their day but were glad that they were able to participate without the need for air travel. US law requires board meetings to be open to the public, and the format allowed anyone interested to log on and listen to the meeting.

It was also unusual for the large number of recommendations that resulted. This abundance of advice was the product, in many cases, of several years' work by the board. This meeting was an opportunity to finalize and formalize the group's efforts.

The first half of the board meeting was devoted to a recommendation concerning an application by Ligado Networks for terrestrial transmissions on a frequency near to that of GPS.

To avoid even the appearance of any conflict of interest, several board members recused themselves from this discussion and the resulting recommendation.

Ultimately, the board recommended the government not approve Ligado Network's request because of the likelihood the proposed transmissions would interfere with many GPS receivers. In addition to this being reflected in the minutes of the meeting, the board sent a letter to the administration outlining this recommendation.

The remainder of the meeting addressed a variety of issues of concern to the board.

Some of the recommendations from this portion of the meeting urged the US Government to:

- Establish an eLoran timing system in the continental United States to provide a backup to GPS timing, while encouraging government agencies to investigate and develop additional solutions. In 2010 and 2014 the board recommended the government establish an eLoran PNT system as a backup for GPS. In 2008 and 2015 the US Government announced that it would build an eLoran PNT system to serve as a complement and backup for GPS, but changes in administrations and other challenges have resulted in this not progressing very far. This year the US Congress provided \$10M for a GPS backup technology demonstration. We at the Resilient Navigation and Timing Foundation understand there has been some recent activity within the executive branch on both the technology demonstration and looking at a final GPS complementary and backup system.
- Allow use of non-GPS GNSS systems in the United States. Current US Government policy requires GNSS providers to apply for permission to have their systems used before receivers in the US are allowed to use them. The European Commission made such an application for Galileo in 2013, but the US Government has yet to act upon it. The board recommended that the government remove barriers to non-US GNSS use in the United States.
- Encourage the use of more resilient GNSS receivers. Technology that enables receivers to resist many forms of jamming and spoofing is available, but it is rarely used, even in critical applications.
- Revise PNT governance. Since 2004 the US Government has not done many of the things to protect, toughen, and augment GPS that it has promised to do. The board recommended that the Government consider revising PNT governance to address the current fragmentation of resources and accountability.

A formal letter to the administration outlining these recommendations is expected shortly.

The minutes for the meeting which contain all the board recommendations, along with two presentations viewed during the meeting are available at their website: www.gps.gov/advisory

This meeting was attended by Representatives Dr [Refaat M Rashad](#) of the Arab Institute of Navigation and Dana Goward of the Resilient Navigation and Timing Foundation, who observed on behalf of IAIN.

*The National Space-Based Positioning, Navigation, and Timing (PNT) Advisory Board provides independent advice to the US Government on GPS-related policy, planning, program management, and funding profiles in relation to the current state of national and international satellite navigation services.