Spirent Federal NAVWAR Training at Northrop Grumman

Planned Agenda – Subject to Change

7:30	Registration & Breakfast Begins
8:00	Orientation

Scenario Generation Sessions
PNT experts will guide attendees step-by-step through creating, executing, and analyzing NAVWAR scenarios on a Spirent simulator connected to a live GPS receiver.

	Beginner User Track *General Session Room*	Experienced User Track *Breakout Room*
8:15	**NAVWAR Fundamentals I** **Session 1b** **Scenario description:** The jamming scenario occurs on an Army test range. A ground-based receiver tracking truth GPS signals navigates through multiple static GPS jammers. As time permits, the group will experiment with audience input on jammer modifications.	**Advanced NAVWAR I** **Session 1e** **Scenario description:** The spoofing scenario occurs off the coast of San Diego. An aerial receiver with circular motion tracking true GPS encounters high-powered jammers, followed by a spoofer. Jamming is subsequently removed, and the spoofing signal slowly deviates from the true trajectory.
9:30	Break with Refreshments	
9:45	**NAVWAR Fundamentals II** **Session 2b** **Scenario description:** The spoofing scenario creates a static spoofer transmitter and spoofer signal with a static position offset. Jamming signals will be modified as necessary to maximize spoofer effectiveness at a specified time and location. As time permits, we will experiment with spoofer modifications that add receiver clock deviations.	**Advanced NAVWAR II** **Session 2e** **Scenario description:** The scenario involves constructing spoofers with a focus on GPS time manipulation and message modifications. Participants will leverage power scripting with a remote interface to implement these techniques, which require executing various real-time scenario commands in rapid succession.

11:30	Lunch	
12:15	**High Dynamic Testing with Remote Motion**	**Session 3**

1:00	**Complementary PNT**
	    • Inertial & sensor fusion
	    • LEO PNT
		Session 4

1:45	**CRPA Testing**	**Session 5**

2:30	**Field Testing in NAVWAR Applications**
	    • Live-sky synchronization for spoofing and anechoic chambers
	    • Record & playback at test events
		Session 6

3:00	Break with Refreshments & CUI Sign-in	

3:15
 	
End at
4:30
	CUI SESSION – US Citizens Only, Visit Request & ID Required
	GPS M-Code
	    • How to test GPS M-Code
	    • MNSA, AES, SDS, Regional Military Protection (RMP)
		Session 7