Photos from Coastal Trident 2021

In the summer of 2022, the Naval Surface Warfare Center's Port Hueneme Division will lead execution of its annual Advanced Naval Technology Exercise. ANTX-Coastal Trident 2022 will be conducted to accelerate identification and implementation of leading-edge capabilities by the U.S. Navy and its interagency partners in port and maritime security.

WHAT IS ANTX?

ANTX is a resource for technology demonstration and field experimentation by the Naval Research and Development Establishment, in order to assist the naval and joint force warfighter in maintaining a competitive technical advantage.

The program is intended to provide technologists with an understanding of the operational challenges faced by the warfighter and, complementing that, the warfighter with an understanding of developing technologies that might meet their needs. These events allow for collaboration between industry, academia, and government research and development organizations and provide a testbed environment in which end users assess the utility of technical innovations before decisions are required on investment priorities.

The result is an acceleration of information exchange and reduction in risk for larger technology exercises, material transitions, future research and development, and a refined understanding of concepts of employment, concepts of operation, and barriers to implementation of emerging technologies.

ANTX-COASTAL TRIDENT 2022

ANTX-Coastal Trident leverages the scenarios and operational environments supporting regional training and exercise initiatives to focus the capabilities and subject matter expertise of the government and its partners in industry and academia on Navy priorities and technical needs.

In 2022, ANTX-Coastal Trident will be conducted to facilitate concept demonstrations and field experiments in the following technology areas:

- Critical infrastructure security, threat mitigation, and incident response
- In-service engineering, maintenance, and sustainment of surface fleet and expeditionary combat systems
- Port and maritime domain awareness, data fusion, and decision support
- Augmented and virtual reality modeling, simulation, and digital engineering
- Unmanned systems applications, implementation, and countermeasures

NSWC PHD's ANTX is encompassed within the architecture of an operational research program known as "Coastal Trident," which is conducted annually to advance the state of the art in countering threats to port and maritime security and the global operations of naval forces.

ANTX-Coastal Trident 2022
ANTX
ADVANCED NAVAL TECHNOLOGY EXERCISE
Port and Maritime Security | In-service Engineering

PLANNING AND EXECUTION MILESTONES

Concept Development Meeting
November 10, 2021

Project Proposals Due
January 12, 2022

Initial Planning Meeting
January 19, 2022

Mid-term Planning Meeting
March 16, 2022

Final Planning Meeting
May 11, 2022

Program Execution
June through September, 2022

After Action Conference and Open House
September 14 and 15, 2022

Coastal Trident 2019

Coastal Trident
Port and Maritime Security Program

Coastal Trident 2018

Coastal Trident 2013

Coastal Trident 2019

Coastal Trident 2017

FATHOMWERX

ALIGNMENT WITH COASTAL TRIDENT

Coastal Trident was established in 2007 to meet the security training and exercise needs of the Port of Hueneme, as well as familiarize law enforcement and emergency response partners with the unique challenges associated with port and maritime operations.

Coastal Trident provides opportunities for operational stakeholders at the federal, state, and local levels of government to train and exercise in relevant and timely scenarios. In 2022, these organizations have communicated the following objectives:

- Exercise of federal, state, and local underwater search and salvage capabilities
- Exercise of federal radiological detection and incident response capabilities
- Exercise of cyber security and cyber incident management capabilities
- Exercise of port and critical infrastructure security capabilities

Alignment of ANTX with Coastal Trident provides access to scenario-based, operationally relevant test environments with representative end users not typically accessible to experimenters. Engagement in these venues maximizes feedback on concepts of employment, mission effectiveness, and operational suitability and provides access to interagency partners that expands awareness of technical solutions.

ALIGNMENT WITH FATHOMWERX

The NavalX Ventura Tech Bridge was established at the "FATHOMWERX" lab at the Port of Hueneme in 2018 to connect, reinforce, and sustain an ecosystem that supports innovation, collaboration, and accelerates adoption of technologies through the engagement of innovators across academia, industry, and government.

FATHOMWERX stakeholders provide unique access and a prototyping, demonstration, and experimentation venue to small businesses and low-technology readiness level (TRL) technologies targeting operational gaps and limitations. These stakeholders include:

- Naval Surface Warfare Center-Port Hueneme Division
- Naval Air Warfare Center-Weapons Division
- Naval Facilities Engineering and Expeditionary Warfare Center
- Port of Hueneme
- Economic Development Collaborative-Ventura County

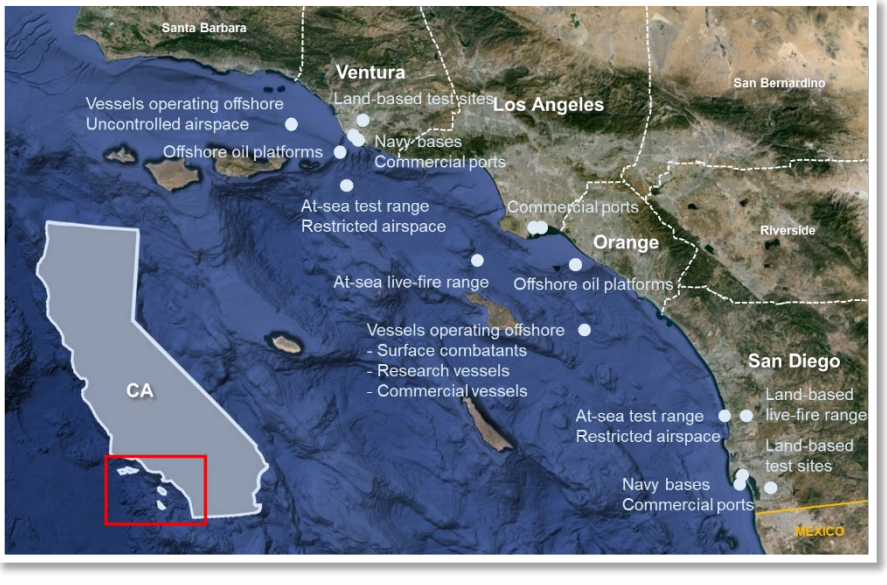
Alignment of ANTX with FATHOMWERX expands access to technology developers and innovators that might not be engaged with the Navy through traditional development pathways. Engagement in this venue maximizes understanding of the technology ecosystem and leverages the efforts of the Tech Bridge to scan, source, and curate developing solutions to operational needs.

AREA OF OPERATIONS

ANTX-Coastal Trident leverages unique access to land-based, waterside, and offshore facilities throughout Southern California to establish robust and relevant learning environments.

This area of operations spans more than 200 coastal miles and extends offshore, clear of congested shipping lanes and recreation areas.

These sites and the resources supporting them enable the planning team to design diverse, realistic, and challenging scenarios in which participants can increase proficiency in port and maritime scenarios, assess and evaluate technical and operational capabilities, and identify priorities for improvement.



ADDITIONAL PROGRAM INFORMATION

How will ANTX-CT22 be conducted?

ANTX-CT22 will be conducted as a series of technical demonstration, field experimentation, and exercise activities, according to the unique objectives and operational, administrative, and support needs of each project.

The program is designed in modular components, which is intended to limit technical and operational risk, addressing the potential that delays or cancellations associated with one activity might impact successful execution of the program. It also serves to allow for participants with differing priorities, levels of proficiency, and technical maturity to concurrently leverage program resources and learning environments.

Under this modular construct, ANTX-CT22 activities may be "plugged-and-played" where participating organizations, operational scenarios, and supporting resources are common. They might also be separated to establish a more focused training environment, assure information or operational security, or facilitate experimentation that allows capabilities to be pushed to failure without effect to other participants.

ANTX-CT22 activities will be conducted where venues and supporting resources match project needs and when technical readiness matches venue availability. For these reasons, there will not be specific locations and dates for execution identified until later in the planning process.

Why should I participate in ANTX-CT22?

ANTX programs are conducted to optimize the path for open innovation that identifies materiel and non-materiel solutions for the Navy and larger joint force, filling previously validated capability requirements and portfolio gaps.

The diverse environments for technical demonstration and experimentation provided through ANTX offer distinct benefits for stakeholders and participants:

- **Fleet and Interagency Partners** – Obtain hands-on or over-the-shoulder exposure to developing technical solutions, a voice in the value and suitability of new technologies, and an opportunity to evaluate new tactics and concepts of operations enabled by emerging technology.
- **Warfare Centers and Government Labs** – An opportunity to collaborate and inform technical development, gain insight into warfighter needs, and obtain access to industry and academic partner research.
- **Program Offices and Resource Sponsors** – An opportunity to evaluate novel concepts and technologies, allowing for a preliminary "test drive" of potential solutions and a venue to inform technical investment.
- **Industry and Academia** – Gain unfiltered exposure and visibility with end users and warfighters. A low-risk, consequence-free learning environment allows for direct feedback, representing a unique opportunity to align development efforts with communicated needs.

How do I participate in ANTX-CT22?

- If you are interested in proposing a project for ANTX-CT22, please submit a completed "ANTX-CT22 Project Proposal" form to the Principal Investigator for consideration. Project proposals will be evaluated by their timeliness in submission, research value, alignment with operational and technical needs, and available resources.
- If you are interested in observing or supporting ANTX-CT22 project planning and execution, please contact the Principal Investigator to discuss your areas of interest.

Coastal Trident 2014

POINTS OF CONTACT

ANTX-Coastal Trident activities are planned and conducted by NSWC PHD's Office of Technology, in partnership with the Port of Hueneme and FATHOMWERX.

NAVSEA WARFARE CENTERS Port Hueneme

For additional information about the program, please contact the ANTX-CT22 Principal Investigator:

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Fleet Experimentation and Exercises

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For information about small business engagement, please contact the Office of Research and Technology Applications:

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ORTA

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For information about FATHOMWERX capabilities and technical engagement, please contact our partners at Matter Labs:

Bryan Went

Matter Labs
Chief Executive Officer

Email: bryan@matter-labs.com
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