Approved, DCN# 2024-10-25-264

## **ONR Warfighter Performance**



## Distributed Open Ocean Mission Rehearsal (DOOMR) Navy Continuous Training Environment on Demand, Online

# **AT A GLANCE**

#### WHAT IS IT?

"On Demand" LVC training methodology inspired by commercial online game portal technology. Results in training audience "pull" of Fleet Synthetic Training (FST), in port or at sea, vice training command "push" of scenario delivery.

#### **HOW DOES IT WORK?**

NCTEnDO is a web application that serves as the interface for endusers to access training scenarios on demand and run automated systems configuration testing through a web browser.

#### WHAT WILL IT ACCOMPLISH?

Provide shipboard watch teams the ability to conduct on demand selfdirected Fleet Synthetic Training in order to maintain their training proficiency and conduct mission rehearsal.

### **POINT OF CONTACT:**

Natalie Steinhauser Program Officer natalie.b.steinhauser.civ@us.navy. mil





Navy Continuous Training Environment on Demand Online (NCTEnDO) provides ships the ability to train on-demand by accessing services through a web browser. The ability to access and train to an online library of scenarios does not currently exist; NCTEnDO was developed to fill this gap and to assist with future training readiness. NCTEnDO at its core is a wargaming web server that utilizes several existing components within the Navy Training Baseline (NTB) to provide services to the fleet -- namely Joint Semi-Automated Forces (JSAF), Joint Simulation Bus (JBUS) which utilizes High Level Architecture (HLA), Distributed Interaction Simulation (DIS), and Link -- to work together to enable this new capability.

As successful training can only occur if a ship is ready and capable, NCTEnDO assists with training systems configuration and readiness using automated connectivity tests and a user validated Ops Check test for evaluation of the ship's sensor configuration.

Additionally, sailors can select a scenario from a catalog of scenarios and choose to train either independently or with other ships also "online" without the need for shore-based engineering or wargaming support.

#### **Research Challenges and Opportunities:**

- Why is developing this technology a challenge? Rapid prototyping of Science and Technology (S&T) presents many challenges and risks due to the unprecedented nature of the work.
- What is challenging about it? Information assurance and cybersecurity controls
  associated with rapid prototype testing on the Research and Development (R&D) network
  often require long lead times for approval from external organizations and it may
  negatively impact the product delivery timeline.
- What opportunities does this provide? On Demand self-directed training in order for shipboard watch teams to maintain their team training proficiency and conduct mission rehearsal, as well as, provide an automated systems readiness process resulting in a reduction of manpower to set up their systems training configuration and run a training scenario. NCTEnDO supports the Chief of Naval Operations (CNO) Navigation Plan 2024 desire to have a "reliable, realistic, relevant, and recordable LVC-enabled architectures to train Navy warfighters to successfully execute high-end warfighting... independent of geographic location." DOOMR will enable Naval forces practice against changing threat environments by conducting organically run LVC training while deployed.

# **OFFICE OF NAVAL RESEARCH**

## www.onr.navy.mil