

ONR Warfighter Performance



Information Warfare Training Architecture (IWTA)

AT A GLANCE

WHAT IS IT?

Development and testing of a Navy Continuous Training Environment (NCTE)-compliant architecture for Information Warfare (IW) training

HOW DOES IT WORK?

An architecture, with associated interfaces, protocols, and simulations, that enables the integration and representation of offensive and defensive Non-Kinetic Effects (NKE) that is compliant with existing Navy training standards

WHAT WILL IT ACCOMPLISH?

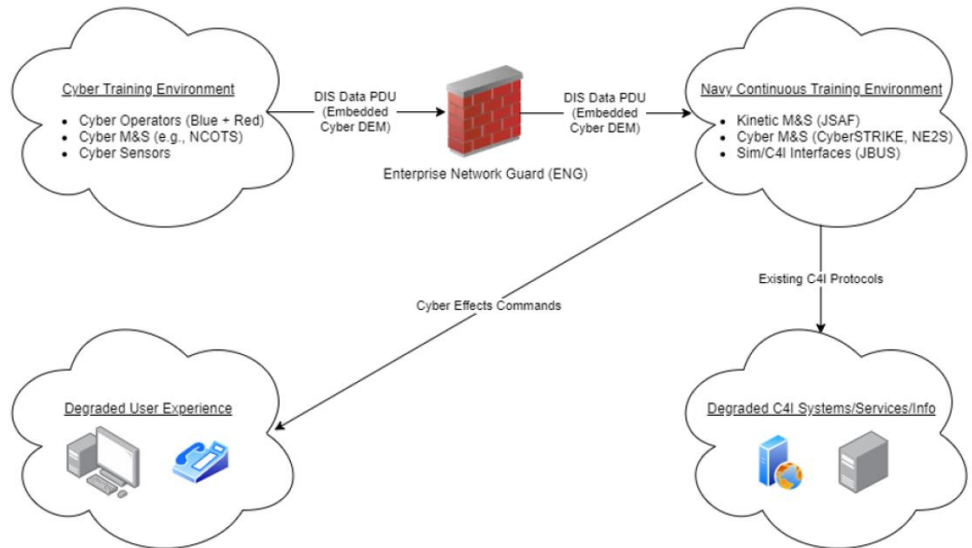
Enables IW leaders and personnel (cryptographers, psyops, cyber, etc.) to test and train concepts and procedures for fighting through denied and degraded environments during Fleet Synthetic Training (FST)

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Current Navy training includes rudimentary, or no Non-Kinetic Effects (NKE). This gives leaders and operators incomplete or inaccurate understandings of their capabilities and limitations in denied and degraded environments. Integrated IW training solutions are needed to give leaders and operators realistic and safe training opportunities to fight through and win in all domains.

The Information Warfare Training Architecture (IWTA) project designs, develops, and demonstrates an integrated architecture operating across training ranges, the Navy Continuous Training Environment (NCTE), and warfighting systems. The key components of that architecture are a) training range sensors that are responsible for the accurate and timely capture, processing, and interpretation of NKE, b) a network guard installed at the boundary between the training range and NCTE to ensure the safe and secure sharing of NKE between the training range and NCTE, and c) reuse and modification of the Joint Simulation Bus (JBUS) to distribute NKE to simulations, emulations, and stimulation systems where they will be experienced by members of the training audience via their native warfighting systems.

Research Challenges and Opportunities:

- Why is developing this technology a challenge? IW training requirements and concepts are evolving – the operational community continues to develop and mature their own concepts, organizations, capabilities, and training requirements.
- What is challenging about it? IW training architectures, standards, and tools are rapidly evolving. Partnerships between government, industry, and academia are forming and maturing to address Science and Technology (S&T) gaps.
- What opportunities does this provide? IWTA enables IW leaders and personnel (cryptographers, psyops, cyber, etc.) to test and train concepts and procedures for fighting through denied and degraded environments during Fleet Synthetic Training (FST).