

Next Generation Threat System (NGTS)



EXHIBIT FACT SHEET

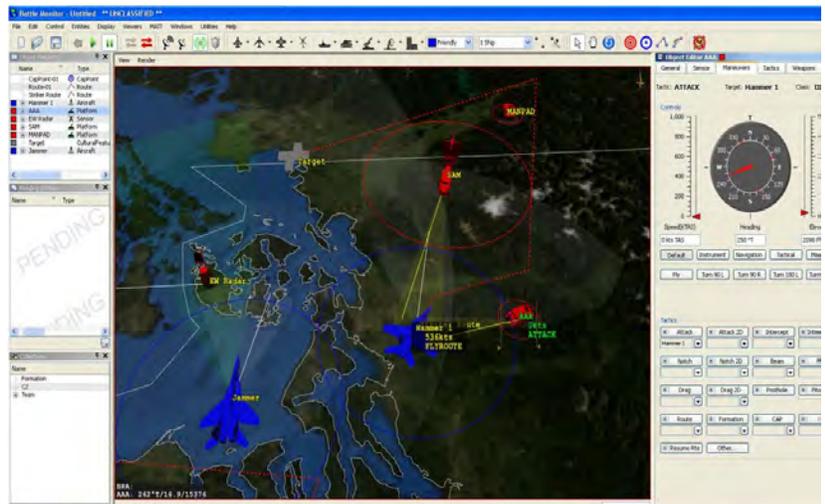
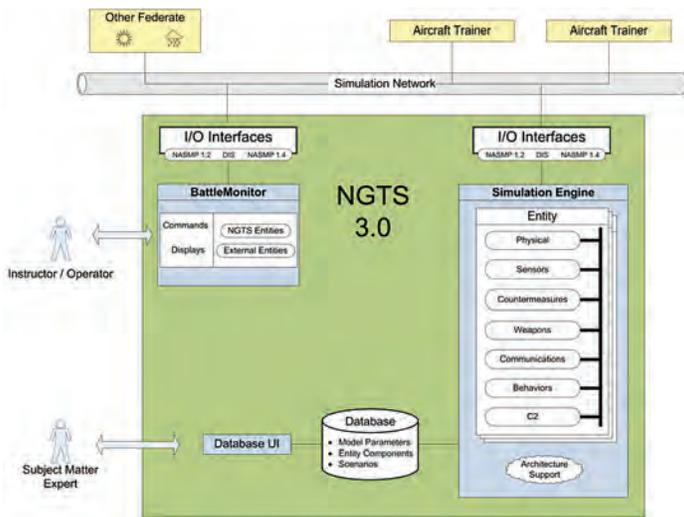
The Next Generation Threat System (NGTS) is a synthetic environment generator used to support training, testing, analysis, and research and development. NGTS models threat and friendly aircraft, ground and surface platforms, and their corresponding weapons and subsystems. NGTS consists of three main components:

- The **Simulation Engine**, which models platforms, weapons, and subsystems
- The **Battle Monitor**, which displays entities in the synthetic environment and controls NGTS entities
- The **Database**, which contains parametric data for platforms, weapons, and subsystems



NGTS, which has been installed at multiple Navy and Air Force sites, is currently being used and/or integrated into F/A-18 C/D/E/F, EA-18G, P-8A, B-52, B-1, and RC-135 training systems. Also, distributed exercise centers, such as the Distributed Mission Operations Center (DMOC), the Air Combat Command's Distributed Training Center (DTC), and the Naval Aviation Distributed Training Center (NADTC) rely on NGTS to provide intelligent threats in support of large scale exercises. Internationally, NGTS is currently being integrated into the Royal Australian Air Force's (RAAF) F/A-18 simulators.

Currently, NGTS v3.1 is released to programs to support user-defined behaviors, which allows users to utilize the NGTS Behavior Editor to graphically define how computer-generated



Main components of NGTS



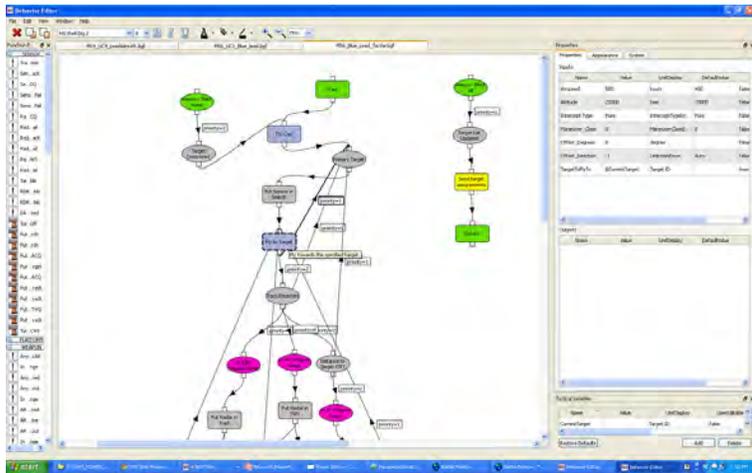
platforms respond to events. Behaviors representing different tactical doctrine can be graphically expressed and assigned to platforms with on-line modification of tactical variables, completely changing how the platforms behave. In support of P-8A training, NGTS expanded the software's capabilities in the area of maritime reconnaissance and Anti-Submarine Warfare (ASW), as well as added large numbers of distracter entities (up to 5,000) that can follow roads and shipping lanes. A significant number of maritime platform types and their associated radars and weapons were added to NGTS to meet the P-8A training curriculum.

Other features added to NGTS v3.0 include a "plug-in" architecture that allows externally developed models to be easily integrated with the NGTS framework, and the ability to run at a rate that is much faster than real time to preview complex scenarios and behaviors.

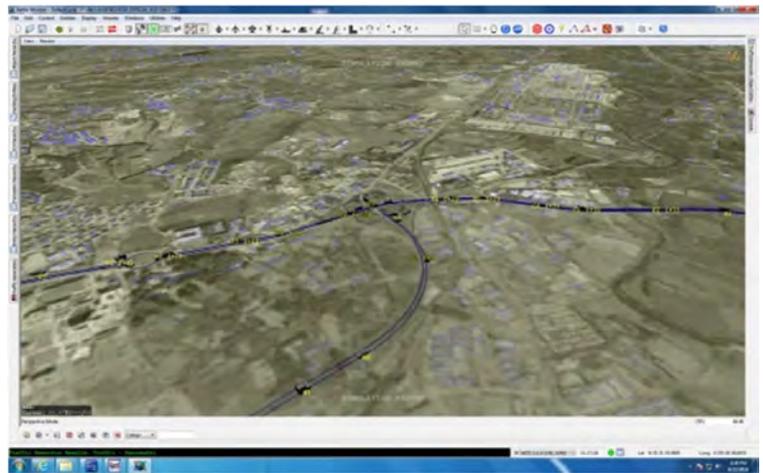
The NGTS team is also working closely with Office of Naval Research's (ONR) Live Virtual Constructive (LVC) performers, who are expanding NGTS capabilities to better support LVC training.

Additionally, the NGTS team is working with Air Force Research Laboratory (AFRL), Naval Research Laboratory (NRL), and other NAWCAD personnel on the Autonomy for Air Combat Missions (ATACM) effort. NGTS will be used to test the Tactical Battle Manager (TBM) autonomy software, and to identify novel tactics in the use of unmanned aircraft supporting manned aircraft.

Further development of NGTS is underway with significant effort on both increased capabilities to better represent the tactical environment and the platforms within the environment, and simplified user interface.



NGTS Behavior Editor



NGTS Expanded Capabilities