TRAIN IN THE HIGHEST FIDELITY BATTLESPACE

JSE

WHO WE ARE

Joint Simulation Environment (JSE) is a government owned software environment operating in government facilities where warfighters can train in the highest fidelity simulation of the operational battlespace. JSE provides a physics-based computer environment capable of simultaneous interactions between manned virtual aircraft simulators and thousands of constructive friendly and enemy air and surface entities. This enables the warfighter to execute testing, virtual training or tactics development and validation in an unprecedented level of fidelity stimulated by the JSE environment. The data density and realism of training experience furnished by JSE enables the warfighter to learn and improve at a pace unachievable anywhere else.

The facility powered by JSE is located at the Naval Air Station Patuxent River and is operated by the IBST department (IBST) department of the Naval Air Warfare Center Aircraft Division (NAWCAD).

BUCKLE UP

CAPABILITIES

FACILITIES

14 co-located 300 x 160 degree field of view domed simulators with 4K projectors
- 8 high-fidelity simulators, Helmet Mounted Display (HMD) capable of F-35A/B/C simulation
- 6 high fidelity simulators configurable as F-35A/B/C or multiple adversary aircraft

3 mission briefing rooms allow for simultaneous briefing, debriefing, and sortie execution
- Independently capable of real-time viewing or playback of cockpit and HMD displays
- Full 360° view of the battlespace along with a shot log of all weapons employments
- Video playback available immediately upon sortie completion, minimizing down time
- Multiple large white boards in each briefing room
- In-depth data analysis on all weapons employments

3 mission control rooms staffed by JSE personnel. Each can host Red & Blue Ground Controlled Intercept (GCI) controllers and allow real time reprogramming of virtual entities in the environment.

Mission planning room with CV2 & F-35 OMS provides access to all relevant classified documents to support planning and mission data load creation, briefing, and debriefing

Highly configurable setup to facilitate pilot training objectives

STAFF

Fully staffed events with a mix of operator, engineering, and test disciplines, providing the warfighter with an expert team to assist in briefing, debriefing, and execution

Limited planning required for event setup and execution

F-35, red air, battle manager, intelligence, and Integrated Air Defense System (IADS) subject matter experts are available to support unit training executing manned red air, GCI, red czar, or threat manipulation roles

Support staff arrange for and provide catered lunches, snacks, and drinks at the customers' request during the support period so that the warfighter can focus on execution
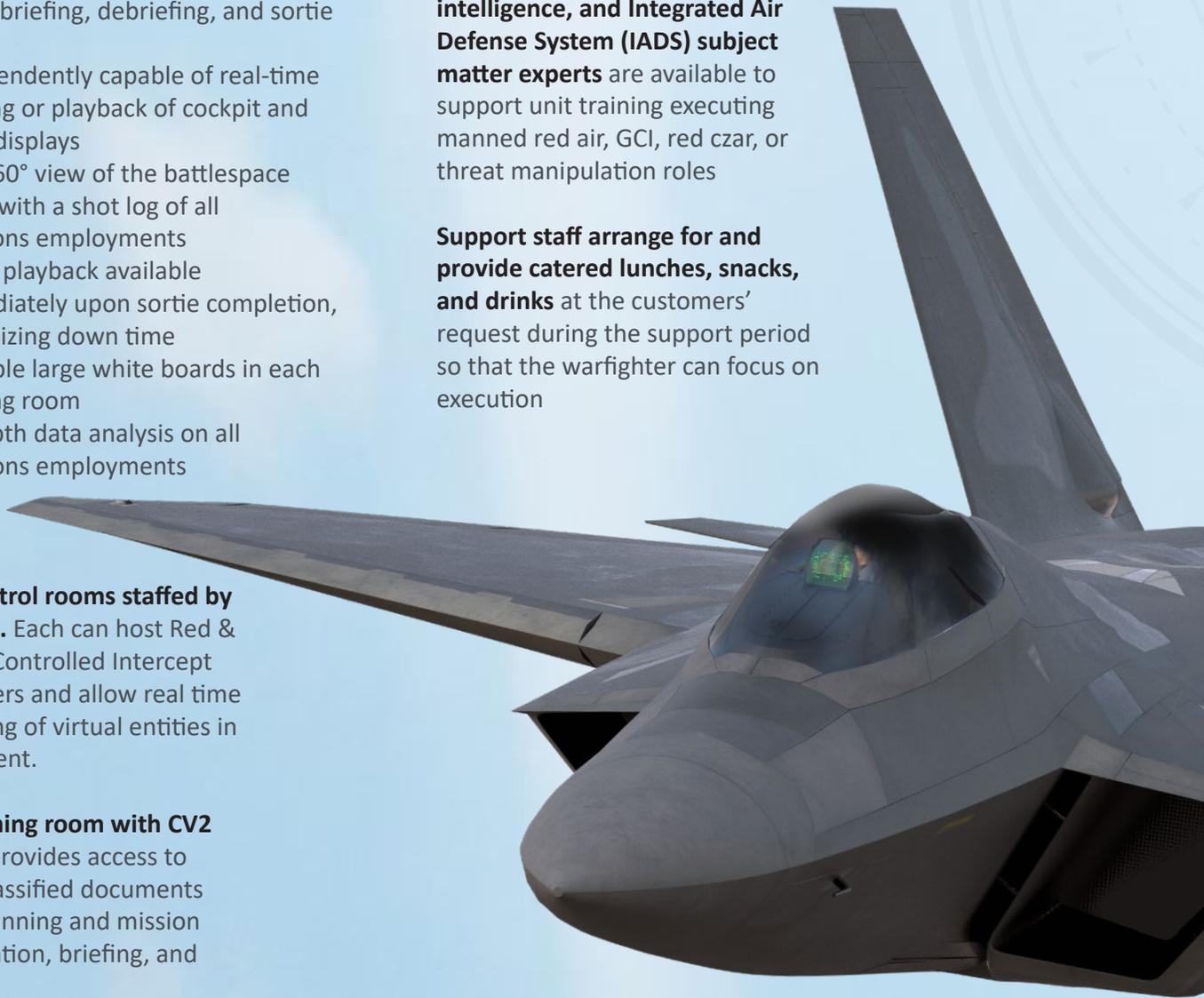
FLAWLESS STABILITY AND WHITE FORCE SUPPORT

THE ONLY PLACE TO EXECUTE OPLAN

SOFTWARE

• **MOSA – modular open system architecture** promotes scalability, third party simulation and model integration, and extensibility for future technologies required to support next generation platforms

• **F-35 in a box (FIAB) software** provides a simulated flight, mission system, and sensor experience nearly indistinguishable from the aircraft as it hosts the actual aircraft Operational Flight Program (OFP)

• **Physics-based interactions and propagation effects** give critical insight into how the F-35 performs in an entity dense environment greater than anything that can be replicated in flight

• **High-fidelity kinetic weapon models** from launch to end-game integrate Raytheon Weapon Server and FAAC blue weapon models, allowing pilots to experience a true estimation of weapons effects as opposed to one driven by rudimentary look up tables

• **Threat and friendly aircraft, naval, and ground units, their associated weapons, sensors, and subsystems** are integrated using authoritative Office of Naval Intelligence (ONI) Next Generation Threat System (NGTS) models, and a mix of Intelligence Community (IC) Threat Modeling and Analysis Program (TMAP) models and other high-fidelity simulation models

• **Multiple high-fidelity adversary aircraft and missile models exist for use in JSE.** Adversaries can either be manned fighters or programmable constructive entities, giving operators a realistic enemy replication and the ability to increase difficulty and complexity as proficiency improves.

• **Mission-level software models simulate processes, data flows, and operator displays of threat IADS,** providing an environment to establish baseline mission effectiveness for warfighters and a means to evaluate and improve Tactics, Techniques, Procedures (TTPs) against over a dozen surface-to-air threats

• **The Analysis & Reporting Tool (ART)** collects all data from each JSE sortie and translates it into a graphical, digestible format allowing the warfighter to see exactly where and why the tactics employed failed or succeeded

• **All software integration is done onsite at JSE by in house engineers** which allows for rapid reprogramming if desired and the ability to expeditiously fix issues that are discovered

• **Choose from a library of pre-planned mission data loads and scenarios for multiple mission sets** including Offensive Counter Air (OCA), Defensive Counter Air (DCA), and air-to-air and air to- surface pilot task training, or work with the JSE team to have customized ones built to meet training needs

Why Does the Department of Defense (DoD) Need JSE?

AFFORDABILITY

PLATFORM MISSION EFFECTIVENESS

JSE provides the DoD premier simulation environment for Fifth Generation+ testing and training.

INTEGRATED WARFIGHTING CAPABILITY

READINESS

LOOKING FOR THE BEST
HIGH-FIDELITY,
PHYSICS-BASED
ENVIRONMENT FOR
SIMULATION TRAINING?

THIS IS JSE

READY TO UP YOUR GAME?

TEST, TRAIN, OR EXECUTE TACTICS
DEVELOPMENT TODAY WITH JSE
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