

# Integrated Test & Training Environment (ITE) Overview & Demo

*THE VALUE OF PERFORMANCE.*

***NORTHROP GRUMMAN***

**I/ITSEC 2016**  
**28 Nov 2016 - 2 Dec 2016**

Brandon Head  
Program Manager, ITE Programs

Approved for public release

## Notes:

This presentation/demonstration makes no representation or endorsement on behalf of the United States Government. Any representation or endorsement is the position/responsibility of Northrop Grumman Corporation.

Please handle appropriately.

# ITE Capability Background

## - SOF EISE System / Software Integration Lab

### • Facility Overview

- Located at the Warner Robins AFLCMC
- Developed and maintained by the 580<sup>th</sup> SMXS / Northrop Grumman IPT
- Provides “flying-in-the-lab” realism through the use of high-fidelity simulations and actual flight hardware
- Supports the following AFSOC aircraft:
  - AC-130H Spectre Gunship
  - AC-130U Spooky Gunship
  - HH-60G Pave Hawk
  - MC-130E Combat Talon I
  - MC-130H Combat Talon II
- Supports AFSOC AC-130J / MC-130J Special Mission Processor
- **Leveraging experience gained through many years supporting the SOF EISE SIL, Northrop Grumman developed the ITE capability**



**The SOF EISE SIL provides “flying-in-the-lab” realism through the use of high-fidelity simulations and actual mission hardware**

# About ITE



# About ITE (continued)

## • ITE Overview

- Developed using open-source tools
- Delivers real-time performance on COTS HW
- Emulates mission/display hardware
  - Drop-in execution of actual OFP binaries
- Uses SIL / WST high-fidelity simulations
- Includes automated scripting capability
- Includes real hardware I/O interface
  - e.g. Analog, Discrete, MIL-STD-1553
- Current Configurations:
  - AC-130U Spooky Gunship
  - AH-64D Apache (under development)
  - MC-130H Combat Talon II
- Adaptable to support [all](#) Aircraft platforms



**ITE brings SIL / WST capabilities out of the lab and onto the individual desktop at a relatively low-cost**

# About ITE (continued)

- ITE Application & Current Users

- **OFF Development and Testing (402 SMXG)**
  - AC-130U Mission, Display, Radar OFPs
  - MC-130H Mission & Display OFPs
- **Flight Hardware Integration (402 SMXG)**
  - AC-130U & MC-130H Mission Computer
  - AC-130U Fire Control Radar
  - AC-130U DMISG
- **Aircrew Training / Mission Rehearsal (AFSOC)**
  - AC-130U Mission Rehearsal (4 SOS)
  - AC-130U & MC-130H Training (19 SOS)

- Processors Emulated To-Date

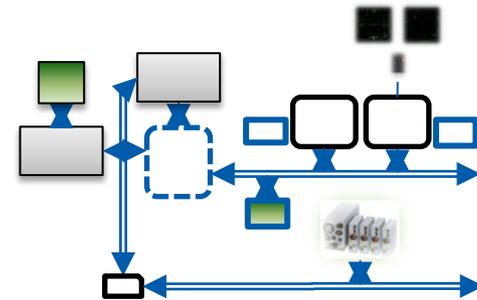
- Intel (multiple)
- PowerPC (multiple)
- Legacy (1750A, MIPS R3000, Z8000, others)



**ITE is feature-rich and has broad-spectrum applicability**

# Additional Information

- Capability PoC:
  - Brandon Head  
Program Manager, ITE Programs  
[brandon.head@ngc.com](mailto:brandon.head@ngc.com)  
(478) 929-7331



**Contact the ITE Team to learn more about the ITE capability and how the ITE capability can help meet your needs**

***THE VALUE OF PERFORMANCE.***

***NORTHROP GRUMMAN***

