Training and Simulation Industry Symposium
16-18 June 2020

Col John Kurian
Senior Materiel Leader
Simulators Program Office
AFLCMC/WNS (WPAFB)
(937) 255-7408
Simulators are Key to Air Force Readiness Strategy
Train How We Fight

• General David Goldfein, AF Chief of Staff
  • Simulators one of his top three initiatives—looking to “fix” simulators
  • AF M&S Governance structure is under review—newly stood up:
    • Chief Modeling & Simulation Officer
    • M&S Steering Committee

• Dr. Roper, SAF/AQ, Feedback
  • Looking for massive multiplayer option—ability to simulate entire AF going to war
  • Partner with small businesses and universities—utilizing pitch days (like shark tank)
  • Innovation Focus—cloud and common architecture; challenged Sims on artificial intelligence
• Move from command segregated missions scenarios (stovepipe) to a joint warfighter environment
  • Massive multiplayer option—simulate entire AF going to war

• Enable Train-How-We-Fight vision
  • Multiservice, multinational
  • Fully live virtual integrated, full spectrum missions

• We are the ‘front door’ for Simulators

• Go Faster Smarter (AI, VR, quick innovation, new Ctr approaches)
  • Innovation Cell
  • Partner w/ AFRL, DoD Agencies, small business, non-traditionals
  • Explore new game-changing technologies to enhance readiness
Simulators Successes in the COVID-19 World

MAR - APR TOTAL CONTRACT ACTIONS
(98 Contracts/$365M Obligated)

NEW CONTRACT Awards
- C-17 TS NATO: $25M
- ANG OTS: $64M
- URT GBTS: $30M
- MAF DMO: $100M

COVID-19 SCIF Sanitization: $2.9M
COVID-19 Masks: $164M
SIMULATORS PROGRAM OFFICE
LEADERSHIP

DEPUTY FOR PROGRAM OPERATIONS
John Carr

SENIOR MATERIAL LEADER
Col John Kuran

DEPUTY FOR PROGRAM INTEGRATION
Tony Johnson

ENGINEERING
Paul Filipek
Training Sys Ops
F-15
Susan Schramm
Air Combat
Mark Caslow
SOF / AETC
Karen Ball

LOGISTICS
Marc Havelc
Air Combat
Chris Dever
SOF / AETC
Joe Selner

AIR COMBAT
Ryan Mccoll
Lt Col Aaron Mart
F-16
Doug ginger
F-35 / AWACS
Dr. Christopher Gayle

AIR MOBILITY
Greg McClean
Mr. Stacy DeBoer
F-16
Rick Johnson
KC-46A / FMS
Bob Shaver

SPECIAL OPS & AETC
Col Ryan Rand
Special Ops & IAV
Col Herb Lefkow

OPERATIONAL TRAINING INFRASTRUCTURE (OTI)
Lt Col Rico Jaffe
Enterprise
Lt Col Mike Leaver
Development

FINANCE
Keith Rushman
Deputy
Shannon Oliver
Air Combat
Don Miller
Air Mobility
Jonathan Bell
SOF / AETC
Ham Levy
Test
Tawfik Mousa
Eric Gillis
Eric Carpenter

CONTRACTING
Conrad Bonk
Air Combat
Kasey Pieczalski
Air Mobility
Norm Williams
SOF / AETC
Shane Hasselbeck

As of 12 Mar 20
SIMULATORS SNAPSHOT

- **64** Programs
- **500+** Members Strong
- **2,300+** Training Devices
  - Over 93% of the Air Force inventory
- **9** MAJCOMS
- **29** Program Offices
- **20** Countries

**FY19**

- **633** Contract Actions
- **$3.18B** Active Year
  - (includes $1.7B for FMS)
- **684** Funding Documents
Virtual Reality

Mixed Reality

Integrated Desktop Trainers

Advanced Flight Training Devices

Part Task Trainers

Full Motion Simulators

In-Aircraft Training

2,300+ devices under life cycle management by WNS
Large Portfolio Touching Virtually Every Aspect of our Warfighters Training Environment
SIMULATORS WAY FORWARD

MODEL BASED SYSTEMS ENGINEERING

OFFICE OF THE FUTURE

PARTNERING WITH AFRL & SIMAF

SIMS UNIVERSITY

FIAR

FMS STANDARDIZATION

ROADMAP

SCARS

LIFE+

LEADING INITIATIVE FOR FLEXIBLE ENVIRONMENTS

1/1/18 SEC WITH "PITCH DAY"

DIGITAL ENGINEERING

DCT ACTION TRACKER

PROACTIVE FORCASTING

PARTNERING ON PROPOSALS

FAR PART 16.5 SOURCE SELECTIONS
OPERATIONAL TRAINING STRUCTURE
2035 FLIGHT PLAN

Operational Training Structure (OTI) Vision – “…a realistic, integrated training environment that allows our forces to train in an operationally and tactically relevant employment scheme to achieve and sustain full-spectrum readiness.”

Air Force has identified 13 Lines of Effort required to achieve the OTI vision

1. Funding Strategy
2. Human Capital Plan
3. SYNTHETIC-TO-LIVE CAPABILITY
4. Data and Technical Standards
5. Acquisition Policy
6. Acquisition Oversight
7. Institutionalize OTI
8. Relevant Threat Environment
9. Quality Metrics
10. Joint Interoperability
11. Multinational Interoperability
12. COMMON ARCHITECTURE
13. Exercise Oversight

*Simulator Program Office directly impacts lines 3 and 12 (LVC/SCARS)
SIMULATE USAF GOING TO WAR

Current Capability Aggregation
- Scattered interoperable/compatible devices
- Diverse configuration specs
- Focus on converging stovepipes

New Capability Aggregation
- Network standards established
- Platform Simulator Integration (Current/Net New)
- Common environment in development

Program Concurrency/Obsolescence/Fidelity/Connectivity Upgrades and Recapitalization

Maximize Pilot TL Level and Capability to Level IV

SCARS - Hybrid Edge Cloud
- SCARS Connections Complete
- JSE

AF M&S Strategy: Execute JSE_AF

VTTC, SCARS, JSE Synergy

4th, 5th, 6th Gen Integrated Environment

Navy/Coalition
- Complete Joint Exercise with other services
- Integration Roadmaps with partner nations
- Interoperability among the services
- SBIR exercises with coalition Tier 3-4 events

Innovation

Technologies: Gaming, Virtual/Augmented Reality, Artificial Intelligence, Display Systems, Cloud Computing

SBIR Phase 1 and 2 Contracting Strategies/Execution and SBIR Phase 3 Innovation BOAs

Innovation

Capability Achieved
- Critical Task Completion
- Deliverable

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CHALLENGES/OPPORTUNITIES

Challenges
• System requirements & development transition from platform SPO to Sims life cycle management
• Modernizing Sim fleet while maintaining throughput & readiness
• Refine/standardize requirements throughout life cycle
• Orchestrating Sims unity of effort across MAJCOMS/users who share systems and/or network
• Managing diverse and dissimilar portfolio of simulators
• Hardware and software obsolescence
• Cyber compliance difficult with 2,300+ devices

Opportunities
• Simulator Common Architecture Requirements and Standards (SCARS)
• Live-Virtual-Constructive (LVC)
• Joint Simulation Environment (JSE)
• Application of new expeditionary training technologies/techniques
• Expansion of distributed mission operation networks and standards ("peer-to-peer")
• Model Based Systems Engineering (MBSE)
SUMMARY
Delivering at the Speed of Relevance

• Growing organization meeting Air Force’s expanding Simulator Enterprise demands
• Focused on meeting HAF/A3T’s OTI 2035 Flight Plan
• Dynamic environment with challenges & opportunities
  • Leveraging latest technologies
  • Major initiative – “Pitch Day” during I/ITSEC