# Welcome to NDIA Automatic Testing Committee (ATC)

## Committee Meeting

**November 17, 2020**

# AGENDA

**12:30 – 100 PM:  Sign-in – A/V checks**
**1:00 – 1:20 PM: Opening remarks and updates: Howard Savage & NDIA**
- Virtual meeting etiquette/instructions
- No Introductions - Attendees will be published after the meeting
- Organization updates

**1:20 – 3:00 PM: Liaison Reports**
- USAF
  - George Tribble
  - John Kesser
- Navy/Marine (Air) – Rick Freeman
- Army – Scott Brown
- DoD Liaison – George Tribble
- Marine Corps (Ground) - Lou Salzano

**3:00 – 3:05 PM: Break**
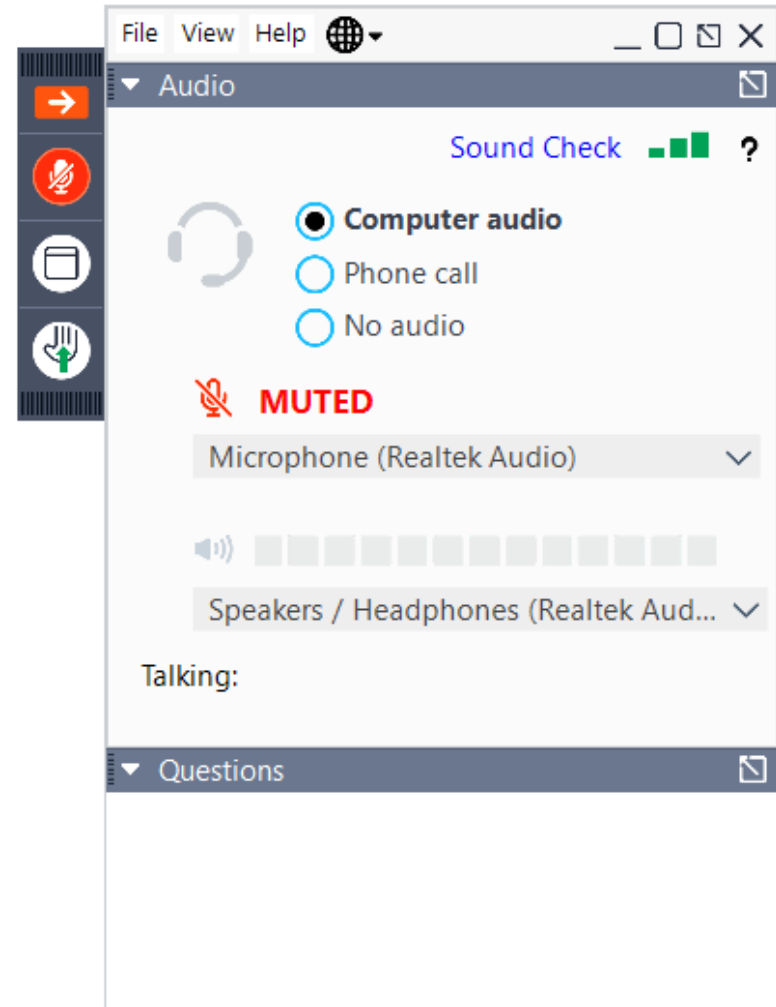**3:05 – 3:30 PM: Liaison reports** *continued*
- Commercial – Christer Ljungdahl
- Projects – Mike Dewey

**3:30 – 3:45 PM: Wrap up**
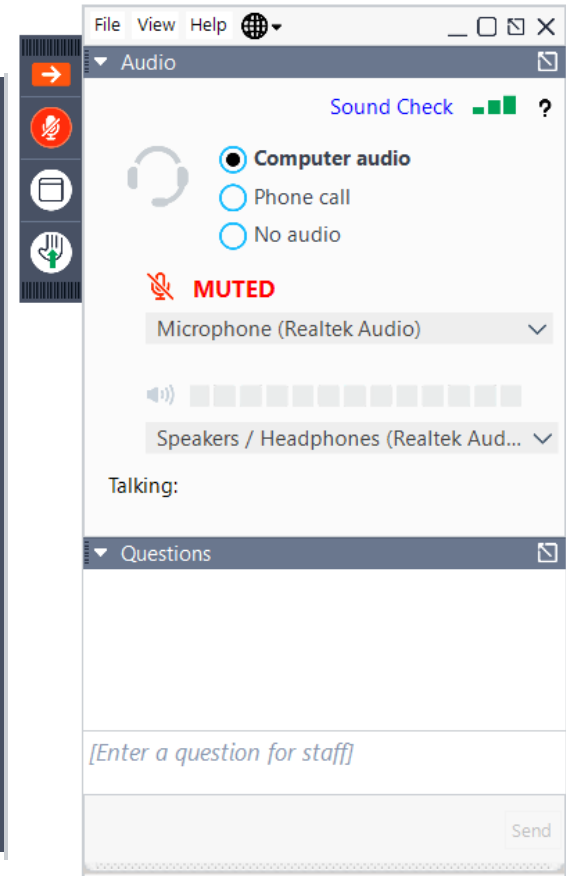**3:45 – 4:00 PM: Adjourn**

# Virtual Meeting Etiquette

- **All attendees are muted upon entry**

- **The Agenda is available in the handouts section of your control panel.**
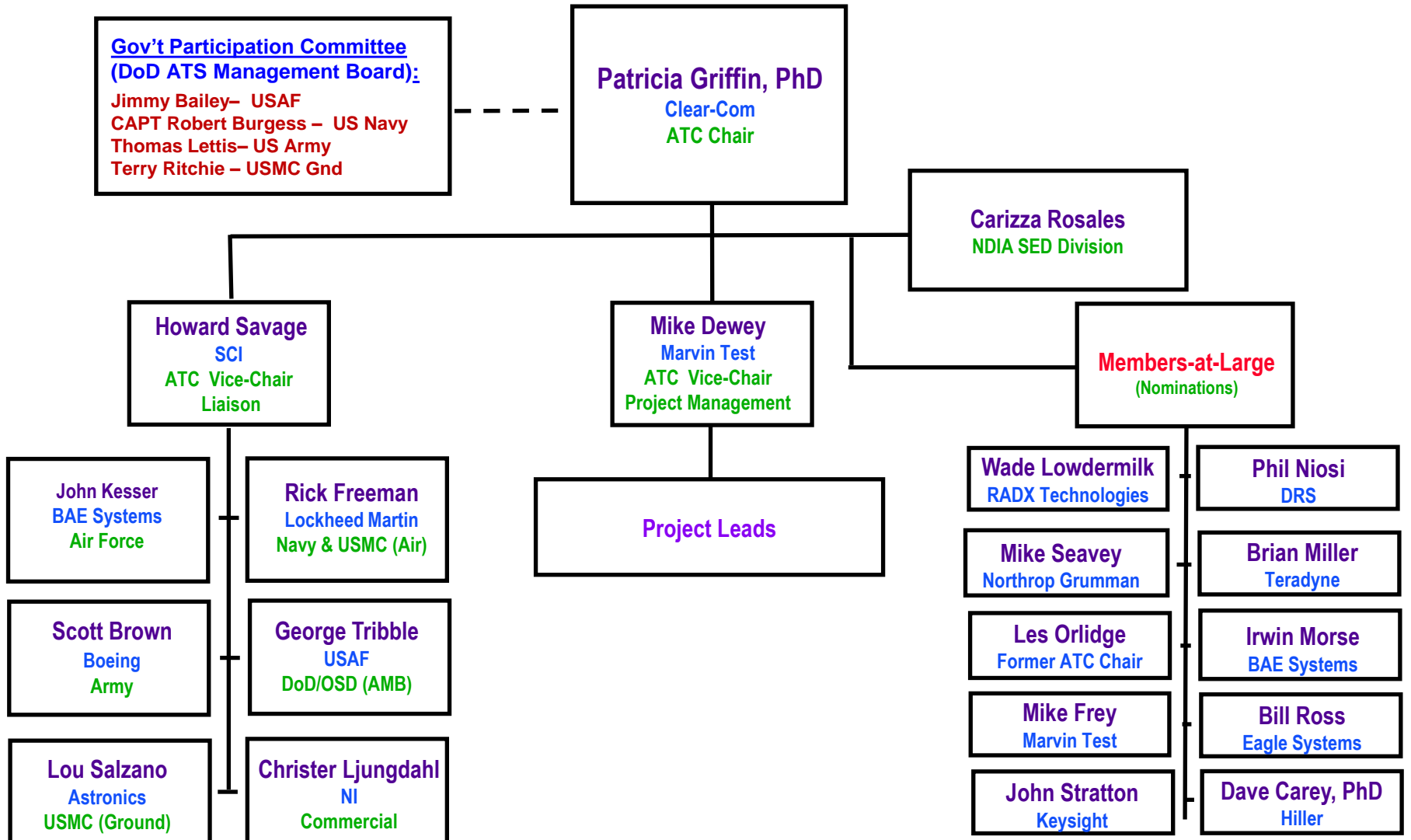
# Attendee Question and Answers

- **Written**
  - **Please type questions into the questions box within the panel.**
- **Verbal**
  - **Please hit the raise hand button.**
  - **The moderator will unmute you and you must also unmute yourself.**

# National Defense Industrial Association - Systems Engineering Division
# AUTOMATIC TEST COMMITTEE

**2020 Steering Committee** (November 17)

**Gov't Participation Committee (DoD ATS Management Board):**
Jimmy Bailey– USAF
CAPT Robert Burgess – US Navy
Thomas Lettis– US Army
Terry Ritchie – USMC Gnd

**Patricia Griffin, PhD**
Clear-Com
ATC Chair

**Carizza Rosales**
NDIA SED Division

**Howard Savage**
SCI
ATC Vice-Chair
Liaison

**Mike Dewey**
Marvin Test
ATC Vice-Chair
Project Management

**Members-at-Large**
(Nominations)

**John Kesser**
BAE Systems
Air Force

**Rick Freeman**
Lockheed Martin
Navy & USMC (Air)

**Scott Brown**
Boeing
Army

**George Tribble**
USAF
DoD/OSD (AMB)

**Lou Salzano**
Astronics
USMC (Ground)

**Christer Ljungdahl**
NI
Commercial

**Project Leads**

**Wade Lowdermilk**
RADX Technologies

**Phil Niosi**
DRS

**Mike Seavey**
Northrop Grumman

**Brian Miller**
Teradyne

**Les Orlidge**
Former ATC Chair

**Irwin Morse**
BAE Systems

**Mike Frey**
Marvin Test

**Bill Ross**
Eagle Systems

**John Stratton**
Keysight

**Dave Carey, PhD**
Hiller

# NDIA AUTOMATIC TEST COMMITTEE

USAF Liaison Report

17 November 2020

John Kesser – BAE Systems

# AGENDA

- Organizational Changes

- COVID-19 Impacts

- Current Program Highlights

- Opportunities

- Future Trends

- Questions

# LEADERSHIP CHANGES - AIR FORCE LIFE CYCLE MANAGEMENT CENTER - AGILE COMBAT SUPPORT

- Lt Gen Shaun Morris replaced retiring Lt Gen Robert McMurry as Commander Air Force Life Cycle Management Center

- Col Charles Cain replaced retiring Col Brady Hauboldt as Vice Commander Air Force Life Cycle Management Center

- Mr. Paul Waugh replaced retiring Ms. Lynda Rutledge as the PEO / Director Mobility and Training Aircraft

- Col Lea Kirkwood moved up from Deputy to become the PEO / Director for Agile Combat Support (AF in the process of filling the SES position and will become the PEO ACS at that point)

- Mr. Kevin Keck has been temporarily reassigned from AFMC/A5/7/9 to Deputy Agile Combat Support

# AFLCMC LEADERSHIP TEAM

**SAE**

Programmatic Direction

Enterprise Management

| | | | | | |
|---|---|---|---|---|---|
| CA | CV | CCC | DS | CR | CG |

## Directorates w/ PEO Authority

| | | | |
|---|---|---|---|
| Agile Combat Support | Armament | Bomber | Business & Enterprise |
| C3I / Networks | Digital | Fighter & Adv Aircraft | ISR/SOF |
| Mobility & Training Aircraft | Presidential & Exec Airlift | Rapid Sustainment Office | |

## Directorates & Support

| | | | | | |
|---|---|---|---|---|---|
| AFSAC | Propulsion | Acquisition | Contracting | Engineering | Finance |
| Inspector General | Intelligence | Logistics | Personnel | Plans and Programs | Architecture & Integration |
| Safety | Small Business | Staff Judge Advocate | 88 ABW | 66 ABG | |

# AGILE COMBAT SUPPORT DIRECTORATE

CMSgt Theodore Angel
Senior Enlisted Advisor

Colonel Lea Kirkwood
PEO/Director

Mr. Kevin Keck
Deputy Director

Colonel Michael Martini
Director's Senior IMA

Mr. Carl Unholz
Chief, AFMETCAL

Mr. Jimmy Bailey
Chief, Auto Test Sys

Colonel Gregg Jerome
Chief, EW & AV

Mr. Emilio Varcarcel
Chief, Human Systems

Colonel John Kurian
Chief, Simulators

Colonel Michael Brox
Chief, Spt Equip/Veh

Mr. Thomas Shaffer
Chief , Contracting –
WPAFB

Mr. Marty Ledden
Chief , Contracting
–Robins AFB

Ms Lynne Leftwich
Chief, Financial
Management

Mr. Alvin "Clay" Mims
Director of Engineering

Mr. Neil Erno
Chief, Logistics

Ms. JoAnn
Freburg
Chief,
Management
Operations

Mr. Dennis
Deitner
Chief, Portfolio
Analysis

Mr. Ron Hannan
Chief, Security

Mr. Steven Peden
Chief, FMS

*Revised:  2 October 2020*

# LEADERSHIP CHANGES – AUTOMATIC TEST SYSTEMS DIVISION

- Lt Col Victor "Scott" Lewis backfilled as Deputy Division Chief
- Mr. George Tribble has transitioned to become the DoD AMB Secretariat and Chief, ATS Advanced Programs
- Mr. James Strickland replaced retiring Ms. Kelly Williams as the Chief, Field Level ATS Branch
- Mr. Robert Colvin replaced Mr. George Tribble as the Chief, Intermediate and Depot Level ATS Branch
- Maj Andrew Dowd backfilled as Chief Portfolio Analysis & Business Integration Branch

# ATS LEADERSHIP TEAM



Mr. David Hand
Deputy, Nuclear

Mr. Jimmy Bailey
Chief

Lt Col V. Scott Lewis
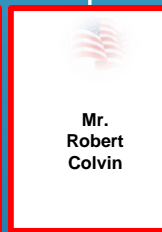Deputy Chief

Mr. George Tribble
DoD AMB Secretariat
Chief, ATS Advanced Pgms

Mr. James Strickland
Chief, Field Level ATS

Mr. Robert Colvin
Chief, Intermediate and
Depot Level ATS

Maj Andrew Dowd
Chief, Portfolio Analysis &
Business Integration

Mr. Kevin Simpson
Chief Engineer

Ms. Stephanie Flynn
PSM

Ms. Christie Brown
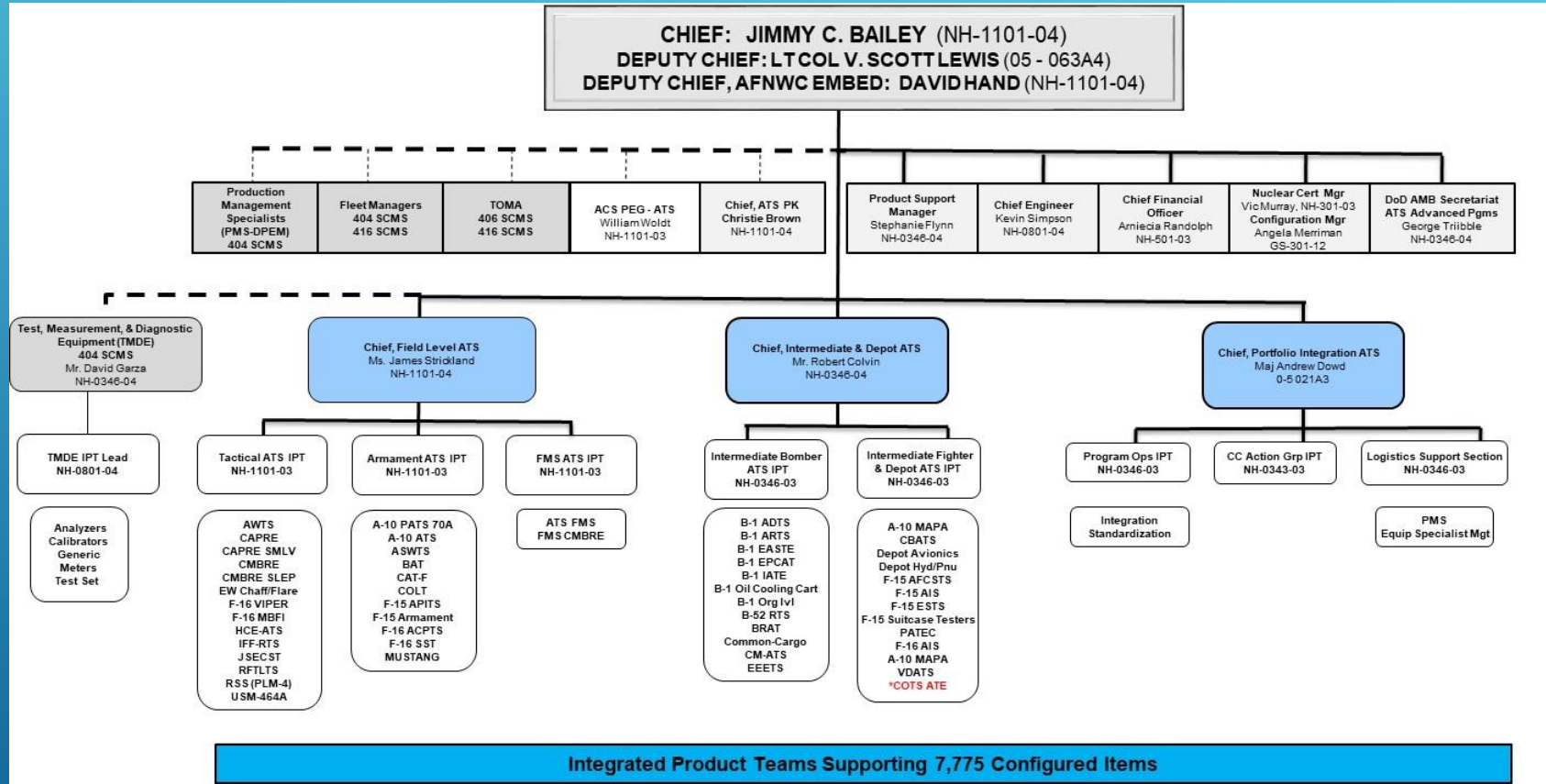Chief, ATS, SE&V &
Human Systems
Contracting

Ms. Arniecia Randolph
CFO

# ATS OPERATIONAL ORGANIZATION CHART



**CHIEF: JIMMY C. BAILEY** (NH-1101-04)
**DEPUTY CHIEF: LT COL V. SCOTT LEWIS** (05 - 063A4)
**DEPUTY CHIEF, AFNWC EMBED: DAVID HAND** (NH-1101-04)

| Production Management Specialists (PMS-DPEM) 404 SCMS | Fleet Managers 404 SCMS 416 SCMS | TOMA 406 SCMS 416 SCMS | ACS PEG - ATS William Woldt NH-1101-03 | Chief, ATS PK Christie Brown NH-1101-04 | Product Support Manager Stephanie Flynn NH-0346-04 | Chief Engineer Kevin Simpson NH-0801-04 | Chief Financial Officer Arniecia Randolph NH-501-03 | Nuclear Cert Mgr Vic Murray, NH-301-03 Configuration Mgr Angela Merriman GS-301-12 | DoD AMB Secretariat ATS Advanced Pgms George Triibble NH-0346-04 |

**Test, Measurement, & Diagnostic Equipment (TMDE) 404 SCMS Mr. David Garza NH-0346-04**

**Chief, Field Level ATS Ms. James Strickland NH-1101-04**

**Chief, Intermediate & Depot ATS Mr. Robert Colvin NH-0346-04**

**Chief, Portfolio Integration ATS Maj Andrew Dowd 0-5 021A3**

| TMDE IPT Lead NH-0801-04 | Tactical ATS IPT NH-1101-03 | Armament ATS IPT NH-1101-03 | FMS ATS IPT NH-1101-03 | Intermediate Bomber ATS IPT NH-0346-03 | Intermediate Fighter & Depot ATS IPT NH-0346-03 | Program Ops IPT NH-0346-03 | CC Action Grp IPT NH-0343-03 | Logistics Support Section NH-0346-03 |

**Analyzers Calibrators Generic Meters Test Set**

**AWTS
CAPRE
CAPRE SMLV
CMBRE
CMBRE SLEP
EW Chaff/Flare
F-16 VIPER
F-16 MBFI
HCE-ATS
IFF-RTS
JSECST
RFTLTS
RSS (PLM-4)
USM-464A**

**A-10 PATS 70A
A-10 ATS
ASWTS
BAT
CAT-F
COLT
F-15 APITS
F-15 Armament
F-16 ACPTS
F-16 SST
MUSTANG**

**ATS FMS
FMS CMBRE**

**B-1 ADTS
B-1 ARTS
B-1 EASTE
B-1 EPCAT
B-1 IATE
B-1 Oil Cooling Cart
B-1 Org lvl
B-52 RTS
BRAT
Common-Cargo
CM-ATS
EEETS**

**A-10 MAPA
CBATS
Depot Avionics
Depot Hyd/Pnu
F-15 AFC STS
F-15 AIS
F-15 ESTS
F-15 Suitcase Testers
PATEC
F-16 AIS
A-10 MAPA
VDATS
*COTS ATE**

**Integration Standardization**

**PMS Equip Specialist Mgt**

**Integrated Product Teams Supporting 7,775 Configured Items**

# USAF ATS – COVID-19 IMPACTS

- ALFLCM/WNA personnel are working a hybrid of WFH and being in the office

- Continuing to engage with contractors via "WebEx", "Teams", etc

- Travel authorized on the basis of mission critical need

- Minor impacts to some programs

- We will continue to deliver automatic test capabilities to the warfighter without interruption

# USAF ATS – CURRENT PROGRAM HIGHLIGHTS AND FUTURE TRENDS

- Contractor developing AIM-260A chose to develop missile using VDATS, the AF DoD Family of Testers (FoT)
  - Contractor partnered with WR-ALC to build VDATS stations at their facility
    - WR-ALC Software Integration Lab (SIL) provided technical support and expertise
    - Proved to be a Win-Win partnering agreement between USAF and contractor
  - Shortens the path to organic capability
    - Common FoT already being utilized for development that can seamlessly transition into organic repair capability
    - TPS already developed using VDATS, no additional software development required

- AFLCMC/WNA desires contractors to consider using VDATS to develop future projects
  - Allows for seamless organic repair stand-up utilizing common FoT
  - Enables contractor to focus on product development versus ATE development/sustainment
  - Should provide contractor with a competitive advantage
    - AF SPO will not have to invest in additional hardware or software costs for depot stand-up

# USAF ATS – OPPORTUNITIES

- VDATS Service Life Extension Program (SLEP)
  - Modernization, modification and DMSMS/OB
  - PoP FY 20 – FY 26

- B-1B ARTS Interim Contract Support (ICS)
  - Spares, repairs, software updates and cybersecurity
  - PoP FY 21 – FY 26

- B-1B ADTS Contractor Logistics Support (CLS)
  - Repair, sustaining engineering and cybersecurity
  - PoP FY 20 – FY25

# USAF ATS – FUTURE TRENDS

- Expect broader Air Force initiatives to make their way into ATS Programs

- Dr. Will Roper, assistant secretary of the Air Force for acquisition, technology and logistics
  - Digital Engineering Initiative (AFA awards ceremony presentation)
    https://www.youtube.com/watch?v=3FZBxOuwiLY
  - #Connected Air Force
  - #Competitive Air Force
  - #Commercial Air Force

- Potential for adapting a digital model of the test equipment to match to a corresponding digital model of the weapon system

- ATE integrators and associated supply chain will have to be engaged

- May consider digital models as part of future source selections

# USAF ATS – FUTURE TRENDS

- Rapid Capabilities Office (RCO)
  - Reducing acquisition timelines as well as time to market for new capability
  - Gathering data direct from the tester
    - Reduce reliance on "user input" from CAMS and REMIS
    - Cloud application and data analytics
    - Leveraging Smart TPS and CBM+ initiatives from other services

- Cybersecurity as an integral part of the system

- Develop an ability to predict mission success

- Support equipment design based on how the Air Force will deploy in the future
  - Reduced size, weight and power

- Improve operability with other services

# QUESTIONS?

# NDIA
# Automatic Test Committee
# Navy/Marine Corps (Air)
# Liaison Reports

## November 17, 2020

Rick Freeman

Rick.Freeman@lmco.com

407 306-6690

# Agenda

- PMA-260 Organization

- CASS Initiatives

- RTCASS Overview

- eCASS Status

- Questions

# PMA260D Current Organization

- **Capt. Robert Burgess** – Program Manager, Naval Aviation Support Equipment Program Office (NAVAIR PMA260)

- Mark Lysaght – Principal Deputy PM (NAVAIR PMA260A)

- **Catherine Buchanan** – Deputy Program Manager for ATS, overall responsibility for acquisition, sustainment, and policy (NAVAIR PMA260D)

- Sean Demme – Assistant DPM to PMA260D (NAVAIR PMA260DA)

- Team Leads:
  - Sean Demme, for CASS/RTCASS/eCASS, eCASS TPS Migration and Joint Service Electronic Combat Systems Tester (JSECST)
  - Jeff Allen and **Jason Zimmerman**, for PEMA and Mobile Maintenance Facilities (MMF)
  - **LCDR Toochikwu (T) Ogbonna**, Mission Equipment (Electro Optic and ancillaries)
  - Tony Conard, for Jacksonville Site Lead
  - Jim Deffler, for Lakehurst Site Lead
  - Elliott Lytle, for Cherry Point Site Lead and CASS FoT FST Lead
  - Gary Kane, for CASS FoT S/W Support Activity (SSA) Lead
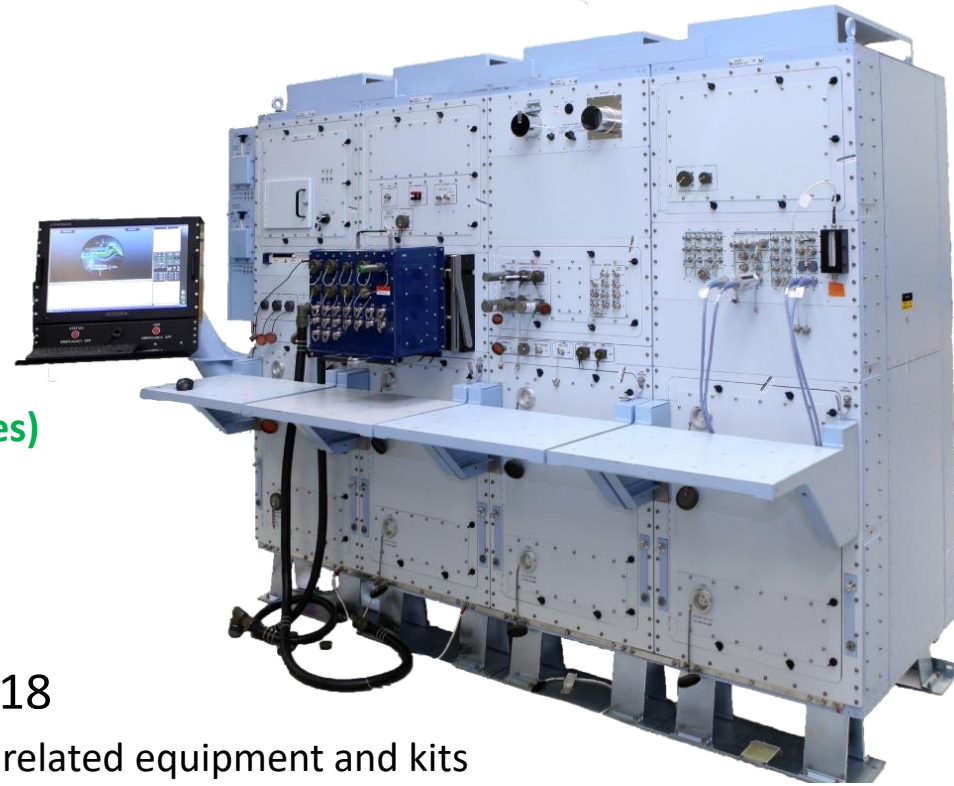
> In April 2020, Calibration (PMA260B) and MMF (PMA260D) Programs moved into PMA260

# CASS and RTCASS Status

- CASS/RTCASS PBL Contract in place through April 2023

  – Follow-on contract will be needed

  – Parts are being salvaged as CASS are taken out of inventory

- CASS sundown began in Sept. 2017 and will be out of Navy/Marine Corps I-level inventory by end of 2025

  – A challenge -- Foreign customers will need support into the 2030s

- **Only new RTCASS effort is a conversion of the RTCASS tech manuals from PDF to an IETM – release in September done by government team**

# eCASS Status

- **LRIP I, II & III Production complete**
  - 67 limited rate production units completed
  - Upgrades and fielding ongoing

- **Full Rate Production 1 awarded Feb 2017**
  - **All 70 production stations completed, including 5 FMS stations (FY18/19 deliveries)**
  - Interim Contractor Support 2 included in award, base plus 3 option years

- **Full Rate Production 2 awarded Aug 2018**
  - **101** production stations ordered along with related equipment and kits
  - **23 delivered to date**
  - Over 300 eCASS stations anticipated for USN, USMC, and FMS
  - eCASS being fielded at **3** FMS countries – others planned

# eCASS Status (Cont.)

- The CASS TPS "Migration" to eCASS Underway
  - About 523 CASS TPSs will be migrated to eCASS in 3 Blocks
  - Block 1 Complete, Block 2 will complete this year, and **Block 3 will complete in early 2021**

- eCASS Forth Generation Electro-Optic (EO4) Program
  - Competitive acquisition to replace Third Generation EO (EO3) consoles with a modernized version – integrated with eCASS, not CASS
  - **Engineering and Manufacturing Design Contract awarded in September 2020**

# Emerging Platforms Requiring TPSs

- F-35B (USMC) and F-35C (USN) I-level support using eCASS, TPS development underway
  - 55 Line Replaceable Component (LRC) candidates identified, Focused on **26** high priority
  - Test requirements and eCASS test capability gap analysis delivered in January 2019, eCASS enhancement underway
  - Targeting some capability by 2021 first aircraft carrier deployment, TPSs for **3** LRCs in DT-C1
  - LM-STAR™ depot TPSs (National Instruments TestStand™) will be upgraded for eCASS I-level (TestStand™ now added to eCASS)
  - **TPSs for 2 additional LRCs being contracted**
  - **TPSs for remaining 21 LRCs to be contracted in 2021**

- E-2D Advanced Hawkeye
  - RADAR
  - EW

- CH-53K King Stallion

- MH-60R Seahawk

- MQ-25 Stingray

# QUESTIONS

# Welcome to NDIA
# Automatic Testing Committee (ATC)

## Committee Meeting

### November 17, 2020

# NDIA Automatic Testing Committee
# DoD ATS Designated Representative's Report

**DoD ATS Executive Directorate Office**
**Nov 2020**

# DoD ATS Executive Directorate -- AMB

- Mr. Jimmy Bailey, Chief, Air Force Automatic Test Systems Division has replaced CAPT Tom Dall as Chair of the DoD ATS Management Board (AMB) Executive Director

    - George Tribble (AF) has replaced Dex Hansard (Navy) as DoD AMB Secretariat

- Last DoD AMB meeting was conducted virtually on 22 Sept 20

    - Reviewed each Service's current and future ATS plans

    - Each of the active Joint Service IPT Chairs summarized their Team's accomplishments and plans

- Next DoD ATS Management Board (AMB) meeting scheduled for Spring 2021, in-person vs virtual TBD

- The DoD ATS Executive Directorate public web site is continuous updated:

    - Address http://www.acq.osd.mil/log/MPP/ats.html

# DoD ATS Executive Directorate -- AMB

- AMB less focused on solely ATS policy but greater focus on leveraging technology investments and sharing information
- Mr. Bailey briefed the AMB Vision and Way Forward
  - Key takeaways from this briefing were
    - Why does AMB exist?
      - We all want the AMB to drive meaningful improvements, not just another meeting
    - What are ways to increase communication across the DoD?
    - How do we become more Joint in Technology Exploration?
      - SBIRs, Industry/Pitch Days
    - How do we tap into other initiatives/groups?
      - NDIA, CBM+, JTEG, JIT, CTMA, etc.

- Bi-Annual "Joint Services ATS Technology Industry Days" ("Quartz Watch")
  - The AMB NxTest IPT plans on holding a virtual QWD the week of 12 April
  - Announcement is planned to be posted on SAMS.GOV

# *Any Questions?*

# Welcome to NDIA
# Automatic Testing Committee (ATC)

## Committee Meeting

### November 17, 2020

# NDIA ATC Meeting
# Commercial Liaison Report

## Christer Ljungdahl

## November 17th, 2020

# AGENDA

- News (Mergers/Acquisitions/Announcements)

- Technology Trends

- PXI, VXI, AXIe, LXI Updates

# NEWS – New Products

**Tektronix Introduces the 8 Series Sampling Oscilloscope Platform:** The 8 Series Sampling Oscilloscope provides a comprehensive optical test solution for telecom and datacom applications, providing > 30 GHz optical bandwidth on 4 channels enabling both single mode and multi-mode conformance testing at 850 nm, 1310 nm, and 1550 nm bands.

**VIAVI Releases World's First 16-lane Protocol Analysis System for PCIe 5.0:** The VIAVI Xgig 5P16 Protocol Analyzer is the first 16-lane protocol analysis system for PCI Express® 5.0, operating at 32Gbps per lane, enabling test and validation to meet the most demanding performance needs of emerging compute-intensive applications such as 400 Gigabit Ethernet, artificial intelligence (AI), IoT and hyperscale computing

**Keysight Delivers First 256 GSa/s Arbitrary Waveform Generator with 65 GHz Analog Bandwidth:** Keysight's M8199A 256 GSa/s AWG delivers twice the sampling rate of any AWG on the market today, coupled with at least 50 percent more analog bandwidth. As a result, research engineers can quickly develop advanced components for terabit transmission systems.

# NEWS – New Products

**Marvin Test Solutions Expands User-Programmable PXI FPGA Product Line:** The GX3748 is a user configurable, FPGA-based, 3U PXI card which features 48 voltage comparator channels. Each input channel can accept input voltage signals from 0 to 50 volts, with programmable threshold levels. Three of the 48 channels are supported by the board's timestamp event feature.

**Rohde & Schwarz launches high-performance ELINT receiver**
Rohde & Schwarz launches the R&S WPU2000 wideband processing unit, a high-performance ELINT receiver, designed for radar detection and analysis at 2 GHz real-time bandwidth, enhancing situational awareness and supporting platform protection in theaters of operations.

**NI Launches 4 GHz Vehicle Radar Test System:** The Vehicle Radar Test System (VRTS) provides automated radar measurement and obstacle simulation capabilities for 76 GHz to 81 GHz automotive radar systems with 1GHz and 4GHz of bandwidth. Engineers can use VRTS to confidently develop validation and production test that's repeatable and reliable.

# NEWS - Acquisitions

**Astronics Announces Acquisition of Freedom Communication Technologies**
Astronics Corporation , a leading provider of advanced technologies for the global aerospace, defense, and other mission critical industries, announced today that it has acquired the primary operating subsidiaries from mass transit and defense market test solution provider, Diagnosys Test Systems Limited (Diagnosys). Diagnosys is a developer and manufacturer of comprehensive automated test equipment (ATE) providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets.

**VIVAVI Solutions acquires Expandium:**  VIAVI Solutions Inc. today announced that it has acquired Expandium, a provider of core network monitoring and assurance solutions powered by big data, based in Saint-Herblain, France. This acquisition augments VIAVI's leading network assurance portfolio with a cloud-native virtualized solution offering, in alignment with virtualization initiatives at Tier-1 service providers worldwide.

**NI Completes Acquisition of Optimal Plus:** "We're confident NI's enterprise software strategy unlocks the value of test data by embracing digital transformation and bringing it to the analog world," said Eric Starkloff, NI President and CEO. "OptimalPlus' data analytics capabilities allow us to build the advanced software required by today's modern enterprise and engineer, enabling the connection of multiple data sources across the digital thread of a product's lifecycle to help dramatically improve quality, yield and avoid failure. We welcome the employees of OptimalPlus and look forward to collectively accelerating our long-term growth ambitions."

**Keysight Technologies Acquires Eggplant:** "As a recognized leader and trusted advisor in layer 1-7 design and test, Keysight is excited to add Eggplant's test capabilities for the software application layer, aligning with our strategy to grow our first-to-market software-centric solutions," said Ron Nersesian, Keysight chairman and CEO. "We're thrilled to welcome the Eggplant team to the Keysight family and look forward to working together in the fast-growing intelligent software test market with differentiated software-as-a-service technologies."
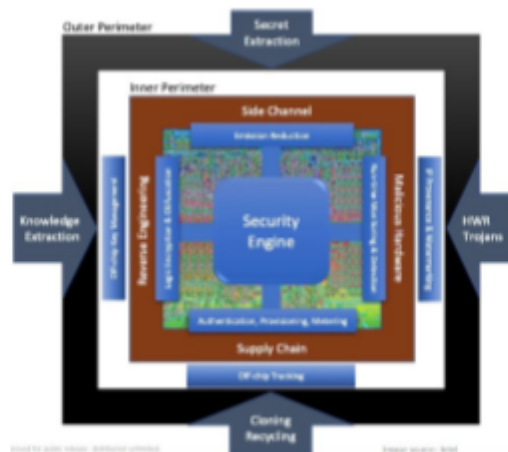
## CHIPS for America Act Would Strengthen U.S. Semiconductor Manufacturing, Innovation

WASHINGTON—June 10, 2020—The Semiconductor Industry Association (SIA) today applauded the introduction in Congress of the Creating Helpful Incentives to Produce Semiconductors for America Act (CHIPS for America Act), bipartisan legislation that would invest tens of billions of dollars in semiconductor manufacturing incentives and research initiatives over the next 5-10 years to strengthen and sustain American leadership in chip technology, which is essential to our country's economy and national security. The bill was introduced today by Sens. John Cornyn (R-Texas), Mark Warner (D-Va.), Jim Risch (R-Idaho), Kyrsten Sinema (D-Ariz.), and Marco Rubio (R-Fla.) in the Senate, and a House version is slated to be introduced Thursday by Reps. Michael McCaul (R-Texas) and Doris Matsui (D-Calif.).

## DARPA Doubles Down on Chip-Level Cybersecurity

The AISS program aims to build an entire design tool and IP ecosystem to automate the process of incorporating cyberdefense into chip designs. This ecosystem will provide protection to application-specific ICs (ASIC) and SoCs from the four most threatening attacks: side-channel attacks, hardware trojans, reverse-engineering attacks, and supply chain attacks
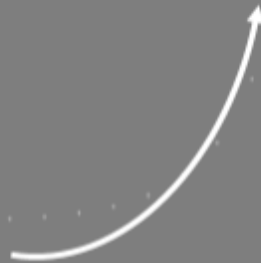
# INDUSTRY/TECHNOLOGY TRENDS – DIGITAL TRANSFORMATION

| CONVERGENCE | ACCELERATING TECHNOLOGY | RAPID CHANGE AND ITERATION | MORE DATA |
|---|---|---|---|

Simulation

Model Based Engineering

Fixed Assets "HW"
To
Soft Assets "SW"

AI and ML
Prognostics and Diagnostics

# AXIe, LXI, VXI, PXI Update

## AXIe and LXI Update

**AXIe Consortium (www.axiestandard.org (:**

- 13 Members
- Specifications

  AXIe-CR: AXIe Compliance Requirements
  and Trademark Usage Rev 1.0

  AXIe-0: Low Cost Instrumentation and
  Switch Architecture

  AXIe 1: AXIe Base Arch Spec, Rev 3.1

  AXIe 2: AXIe Software Spec, Rev 2.2

  AXIe 3: AXIe Zone 3 Mechanical

  AXIe 3.1: Semiconductor Test
  Extension,Rev 1.0

**LXI Consortium (lxistanda...**

- 53 Members
- Specifications:

**Version 1.5 LXI Specificati...**

- (1) a core specification
  *Specification 2016*, to
  Devices must conform

- (2) a set of optional Ex
  Features, to which ve
  choose to conform. Ve
  required to declare to
  Extended Functions (if
  conform.

## VXI and PXI Update

- VXI Bus Consortium:
  - 13 Members
  - > 1500 Products
  - 394 Mfg. ID's issued
  - VXI 1 Revision 4.0
  - http://www.vxibus.org
    - Products at
      http://vxibus.org/products.html

- PXI Systems Alliance (www.pxisa.org):
  - 67 Members (11/28/2018)
- Specifications:

  PXI-1 PXI Hardware Spec. Revision 2.3

  PXI-2 PXI Software Spec. Revision 2.5

  PXI-4 PXI Module Description File Spec. Rev. 1.2

  PXI-5 PXI Express Hardware Spec. Rev.1.1

  PXI-6 PXI Express Software Speci. Rev. 1.3

  PXI-8 PXI MultiComputing SW Spec Rev. 1.1

  PXI-9 PXI /PXIeTrigger Mgm't Spec. Rev. 1.1

  **9/28/19** - Updated Specifications to Include
  Support for Linux Operating System, Multi-Slot
  Modules and Higher Power PXI/PXIe Modules

## Sign of the times?

- **No Updates**

# NDIA ATC Projects

Mike Dewey

November 17, 2020

# Previous Projects / Activities

- Test System Architecture Report – October 2012
- Recommendations and Guidelines for Incorporating User FPGAs into ATS Applications – Jan 2018.
- Cyber Security Task – initiated in April 2018
  - Questionnaire regarding Cyber sent to all NDIA members in June 2018 – limited response – 3 from DoD, 2 from industry
  - Reluctance on the part of industry to participate – addressing cyber is considered company IP
  - Projects committee recommended terminating any additional effort for this task
  - Any future effort should be coordinated with other existing cyber project efforts that might be underway with other NDIA divisions, e.g. the Cybersecurity Division
  - Framework for Cyber security of ATE systems will most likely employ methods / procedures detailed in the DoD's Application Security Technical Implementation Guide which is based on NIST documents and details how to manage and maintain a secure software – based system

- Interest expressed by USAF about how to ensure "cyber safe" 3rd party instrumentation – is this adequately addressed by current commercial instrument vendors?

- TPS IPT effort – Bill Ross suggestion that projects team engage with Navy on this effort

- Other suggestions?

# Thank you for attending the NDIA Automatic Testing Committee (ATC)

## Committee Meeting

### November 17, 2020