MIL AM 2021

# 5TH MILITARY ADDITIVE MANUFACTURING SUMMIT & TECHNOLOGY SHOWCASE

## SUMMIT AGENDA

27-28 JULY 2021

HILTON TAMPA DOWNTOWN HOTEL

TAMPA, FL

MILITARYAM.DSIGROUP.ORG

## Program Design & Goal:

DSI's 5th Annual Military Additive Manufacturing Summit is designed as an educational "Town Hall" forum, where thought leaders & key policymakers across military services, defense agencies, & civilian organizations can come together for actionable discussions & debate. This year's Summit will focus on the latest innovations in 3D printing technologies & the push across the DoD to rapidly supply durable, effective equipment & parts to the Warfighter on the battlespace. Additive manufacturing methods are being quickly integrated across the Armed Services to increase the current level of capability, while reducing the cost of parts, in order to deliver greater operational flexibility to the Warfighter and further enhance the defense industrial base.

This event will focus on collaborations with industry to leverage advanced manufacturing technologies for military operations. Military commands & defense agencies will have the opportunity to learn how to improve their supply chains at scale, increase the size, weight, & power (SWAP) of their platforms/weapons systems, & enable the Warfighter to efficiently replace parts in an efficient expenditure of time. Senior leaders from across the services will explain their overall goals in using 3D printing capabilities to revolutionize materiel/combat readiness.

Discussions at this Summit will also focus on emerging topics in the additive manufacturing community to include; leveraging 3D printing in response to the COVID-19 pandemic & utilizing AM processes to enhance the durability & speed at, which military aircraft parts are delivered to the battlespace. Additionally, this forum will give attendees the chance to hear from Senior leaders on their efforts to maximize the benefits that advanced manufacturing methods can offer in helping the Warfighter to maintain a decisive edge in the era of Great Power Competition.

## Operating Guidelines:

DSI's Military Additive Manufacturing Summit directly supports DoD/Federal Government priorities by providing a conduit for officials to efficiently reach audiences outside of their respective offices that directly impact their department's mission success, at no charge to the government, & in an efficient expenditure of time.

DSI's Summit will provide a forum to address & improve internal & external initiatives, meet with & hear from partner organizations, disseminate vital capability requirements to industry, increase visibility within the larger community, & generally support their mission.

* The Summit is open & complimentary to all DoD & Federal Government employees & is considered an educational & training forum.

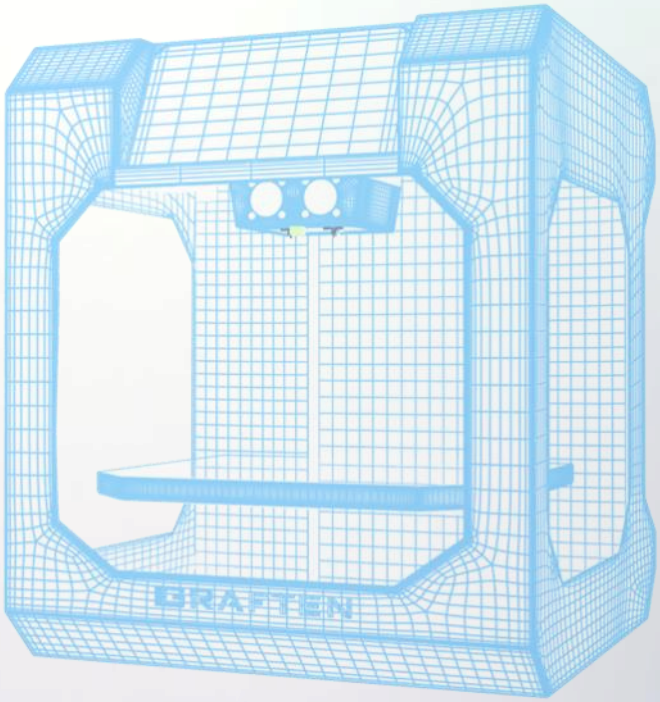
(Industry & academia members are charged a fee of attendance)

## General Target Audience:

US Military Services, US Military Commands, Military & Government Research Labs, Government Agencies, Academia, & US Technology Solution Providers,3D Printing Companies, Prototyping, Supply Chain Solutions, Logistics

## Specific topics to be discussed include:

- Driving DoD's efforts to invest in AM to support modernization, material readiness & Warfighter capability
- Integrating additive manufacturing technologies Into the Army's tactical, operational & organic industrial base to enable enhanced Soldier capability
- Utilizing 3D Printing to revolutionize aircraft maintenance & overall operations across the US Air Force
- Leveraging additive manufacturing to expand the U.S. Navy's maritime advantage over the adversary
- USMC initiatives towards enhancing 3D printing capabilities in support of a more agile & resilient MAGTF
- Utilizing additive manufacturing technologies at DLA to modernize the supply chain for the Warfighter
- Advancing the AM Roadmap: Transforming the America Makes Digital Storefront to better support DoD operations
- Leveraging 3D printing solutions across the DoD to produce medical materiel in response to COVID-19 equipment shortages

# SUMMIT SCHEDULE

## JULY 27TH

**7:00—7:45** *Registration and Light Breakfast Reception Open*

**7:45—8:00** **Chairman Opening Remarks**
**Paul Hellar, Senior Business Development Manager – Additive, Phillips Corporation**

**8:00—8:15** **Moderator Remarks:**
**LTG David Halverson, USA (Ret), Chairman & CEO, Cypress International Inc. (Confirmed)**

**8:15—9:00** **Leveraging Additive Manufacturing to Support Logistics and Engineering Initiatives in the CENTCOM AOR**

- Harnessing additive manufacturing capabilities to enhance the efficiency of existing supply chains
- Reducing demand at the point of need by enabling warfighters to produce combat spares
- USCENTCOM's future vision for implementing 3D printing processes in support of the Warfighter

**Robert Helgeson, SES (Confirmed)**
Deputy Director, Logistics & Engineering
USCENTCOM

**9:00—9:45** **Utilizing Advanced Manufacturing with the Army (AMC) to drive increased Readiness**

- AMC Strategy and process (Critical Path) for the adoption of Advanced Manufacturing
- Integrating Advanced Manufacturing into the Organic industrial Base (OIB) to drive readiness
- Enabling the Warfighter to utilize advanced manufacturing to drive readiness from within the formation (adoption of forward printing)

**MG Darren L. Werner, USA (Confirmed)**
Commanding General
U.S. Army Tank-automotive and Armaments Command (TACOM)

# SUMMIT SCHEDULE

## JULY 27TH

**9:45—10:30** **Leading the Joint Staff's Efforts to Leverage Advanced Manufacturing to Enhance Supply Chains and Improve Materiel Readiness**

- Utilizing AM technologies to ensure rapid response to emerging Warfighter needs
- Detailing how 3D printing can improve combat readiness as well as maintenance & sustainment in the battlespace
- Near term goals at the J4 toward implementing the innovations made in additive manufacturing to help the Warfighter maintain a decisive edge

**Kristina M. O'Brien, SES (Confirmed)**
Principal Deputy Director of Strategic Logistics
Joint Staff, J4

**10:30—10:40** **Advances in Large-Format Metal Additive Manufacturing**

- Latest technology Lincoln Additive Solutions has employed in LFMAM (i.e. large-format metal AM)
- Application examples of LMFAM

**D Mark Douglass, PhD, CFA (Confirmed)**
Business Development Manager
Lincoln Electric

**10:40—11:40** **Networking & Exhibition**

**Tech Talk: Fed-Defense Business Lead**

**Chris Crowley**,
Federal & Defense Industry Lead

Location: Exhibit Hall Stage

formlabs

**11:40—12:25** **Driving DoD's Efforts to Invest in AM to Support Modernization, Material Readiness & Warfighter Capability**

- Advancing the DoD AM Strategy to help field modernized defense systems that are faster, lighter, stronger, more impactful systems
- Align AM activities across the DoD Agencies and external partners to help accelerate AM adoption & establish a common digital thread
- Current efforts to expanding proficiency in AM & build industry partnerships to increase key investments in 3D printing

**Robert A. Gold, SES (Confirmed)**
Director, Technology & Manufacturing Industrial Base
STP&E, OUSD (R&E)

**12:25—12:55** **Open Systems to Accelerate Metal AM for Defense Applications**

- Open-architecture systems thinking for “right system, right time, right cost” solutions
- Modular, customizable monitoring for reducing development and inspection costs
- Integrating fleets of AM systems into a larger, more secure defense ecosystem

**Ty Pollak, PhD (Confirmed)**
President and CEO
Open Additive, LLC

**12:55—1:55** **Networking Lunch**

**1:55-2:40** **Utilizing 3D Printing to Revolutionize Aircraft Maintenance & Overall Operations Across the US Air Force**

- Leveraging advanced manufacturing solutions to address the high costs of maintaining the service’s aging fleet
- Integrating agile additive manufacturing processes that can efficiently deliver flight critical hardware to forward deployed forces
- Near term considerations toward partnering with industry to help AFMC achieve its goal of speeding up 3D printing capabilities
- AGORA; advanced manufacturing marketplace at scale

**Zack Miller (Confirmed)**

Chief, Advanced Manufacturing Program Office
Air Force Life Cycle Management Center/RO

**2:40—2:50** **Unlocking Additive Manufacturing's Potential with Automated Post-Printing**

- How common post-processing challenges can manifest and how they vary by print technology and scale of operation
- Novel technology approaches to alleviating the post-processing bottleneck and achieving operational improvements

**Jon Strible (Confirmed)**
Business Development Manager
PostProcess Technologies, Inc.

## 2:50—3:50 Networking & Exhibition

**Tech Talk: Accelerating the Adoption of AM across the DoD**

**Tony Higgins,** Federal Sales Lead, Markforged

Locations: Exhibit Hall Stage

GovSmart.

## 3:50-4:35 Advancing AM Processes & Technologies in Support of Manufacturing for U.S. Army & DoD Systems

- Challenges and opportunities in Organic Industrial Base additive manufacturing
- Transforming manufacturing efforts at RIA-JMTC in support of Army readiness and modernization requirements

**COL Martin J. Hendrix III, USA (Confirmed)**
Commander
Rock Island Arsenal-JMTC, U.S. Army

## 4:35—5:40 Panel Discussion: Leveraging 3D Printing Solutions Across the DoD to Produce Medical Materiel in Response to COVID-19 Equipment Shortages

This panel will detail the incredible efforts made by personnel across the DoD in collaboration with the Organic Industrial Base to determine if there were existing capabilities within the government to produce an alternative to specific medical supplies that were unavailable during the height of the COVD-19 pandemic. It will bring together military experts from across Army, Navy, Marine Corps and Air Force, to assist in developing a strategy to produce supplies such as 3D-printed swabs/Face Shields etc. These efforts proved to be instrumental in driving forward the DoD's mission to up-scale efforts against COVID.

**Panel Moderator:**
**Col Howie Marotto, USMCR, Deputy Commander, 4th Marine Logistics Group**
**AM Business Director, EWI (Confirmed)**

**Panelists:**
**Randl Besse, PM & SME,** Rock Island Arsenal-JMTC, U.S. Army (Confirmed)

**Michael Guinn,** Advanced Manufacturing Lead, USSOCOM (Confirmed)

**Capt. Matthew Audette, USMC,** Advanced Manufacturing Project Officer, AMOC, Marine Corps Systems Command (Confirmed)

**Kevin Wallace,** Division Chief, Systems Engineering & Acquisition AM Principal, CCDC Chemical Biological Center (Confirmed)

**Edward Brown, MS**, Biomedical Engineer/Product Manager,
Warfighter Expeditionary Medicine & Treatment (Warfighter EMT) PMO, USAMMDA (Confirmed)

**End of Day One**

# SUMMIT SCHEDULE

## JULY 28TH

**8:00—8:45** ***Registration and Light Breakfast Reception Open***

**8:45—9:00** **Moderator Remarks:**
**LTG David Halverson, USA (Ret), Chairman & CEO, Cypress International Inc. (Confirmed)**

**9:00—9:45** **Utilizing Additive Manufacturing Technologies at DLA to Modernize the Supply Chain for the Warfighter**

- Sharing AM Data through the Joint AM Model Exchange
- Operationalizing DoDI 5000.93 to integrate DLA processes with the Military Services
- Refining DLA's AM value proposition: agile readiness, integrated AM technology, and risk management and testing

**RADM Doug Noble, USN (Confirmed)**
Director of Logistics Operations, J3
Defense Logistics Agency

**9:45—10:30** **Leveraging Additive Manufacturing to Expand the U.S. Navy's Maritime Advantage Over the Adversary**

- Facilitating the use of 3D printing methods to increase maintenance & reduce costs for all Naval ships/systems
- Deploying AM equipment onto multiple ship classes to help in producing key spare parts that may be needed across all Navy platforms
- Future goals at NAVSEA to integrate 3D printing technologies to enhance Sailor readiness

**RDML Jason M. Lloyd, USN (Confirmed-Virtual)**
Chief Engineer and Deputy Commander for Naval Systems Engineering and Logistics
NAVSEA

**10:30—11:00** **Advancements in X-ray Computed Tomography: An Enabling Technology in Additive Manufacturing Throughout Research, Design, and Qualification**

Avonix Imaging, a leader in industrial x-ray and computed tomography (CT), presents a technical review of demonstrated applications of x-ray CT within several critical phases of the additive manufacturing process. This also includes discussion of new technologies, which have been tailored for use in research and production of additively manufactured materials.

**Chris Peitsch (Confirmed)**
Business Development Manager – X-ray/CT Systems
Avonix Imaging

**11:00—12:00** **Networking Break & Exhibits**

**Tech Talk: Accessible and Affordable Metal Printer for On-Demand Printing**

**Dave Jankowski**, Sales Operations Leader, Xact Metal

Location: Exhibit Hall Stage


**12:00—12:45** **USMC Initiatives Towards Enhancing 3D Printing Capabilities in Support of a More Agile & Resilient MAGTF**

- Implementing logistics plans for AM technologies to increase the endurance and reach of the MAGTF
- Guiding USMC modernization efforts to further manufacturing and material development
- Near-term I&L goals to develop logisticians that will help facilitate proficiency in expeditionary operations

**Capt Catherine M. DeLeal, USMC (Confirmed)**
Installations And Logistics (Logistics Division)
HQMC

**12:45—12:55** **SBIR Update: The Dichotomy of AM Tooling and Existing Desktop 3D Printer Infrastructure**

*The promise of AM is a minefield of possibility and technical trade-offs when bringing 3D Printing closer to the field of engagement. IC3D's project for Army C5ISR focuses on AM tooling for MRO using existing desktop 3D printer infrastructure. This talk will explore differences in AM equipment, materials, composites, and other considerations related to impacts on part quality.*

**Michael Cao (Confirmed)**
CEO, IC3D

**12:55—1:55** **Networking Lunch**

# SUMMIT SCHEDULE

## JULY 28TH

**1:55—3:10** **Panel Discussion:**
**Utilizing Advanced Materials & Manufacturing Methods to Enhance the Durability & Speed at Which Military Aircraft Parts are Delivered to the Battlespace**

This panel will detail current efforts across the DoD to drive the development and deployment of advanced additive manufacturing (AM) solutions for applications in tooling, ground support, maintenance repair and overhaul (MRO), and flight-certified parts for military aircraft and ground vehicles. It will bring together experts to detail how innovations in AM technologies have assisted in, both rapid part production at the point of use, as well as with decreasing the time required to certify new materials, such as Metal 3D printed parts, for use in flight.

**Panel Moderator:** **Dr. Mark D. Benedict,** AM Lead, AFRL (Confirmed)

**Panelists:**
**Glen Drebes,** Maintenance Expert, Oklahoma City Air Logistics Center (Confirmed)

**Larry (L J) Holmes,** Assistant Director of Digital Design & Additive Manufacturing University of Delaware (Confirmed)

**John Shingledecker, Ph.D.,** FASM, Senior Technical Executive, Enabling Technologies & Advanced Generation, EPRI (Confirmed)

**Paul G. Allison, Ph.D.**, Associate Professor & Director, Manufacturing at the Point-of-Need (MPN) Center, University of Alabama (Confirmed)

**3:10—3:40** **Final Networking Break – Exhibit Breakdown**
*3:40—Exhibitors break down begins*

**3:40—4:25** **Advancing the AM Roadmap: Transforming the America Makes Digital Storefront to Better Support DoD Operations**

- Enhancing overall AM technology development requires the utilization of human and digital resources across government, industry, & academia
- Establishing an Additive Manufacturing (AM) Digital Infrastructure for the US Army future AM supply chain
- Pioneering future endeavors in deep learning for accelerated AM adoption across the DoD

**John Wilczynski (Confirmed)**
Executive Director
America Makes/NCDMM

**4:25—5:10** **Developing the Most Effective AM Practices for Army Customers and the Organic Defense Industrial Base**

- Integrating additive solutions into and on military systems to help reduce Soldier downtime in the battlespace
- Utilizing AM to allow for the rapid development & prototyping of solutions for current/emerging threats
- Leveraging commercial AM solutions to help Army with their current modernization efforts

**James L. Zunino III (Confirmed)**
Materials Engineer / AM Principal, Technical Lead, CCDC Armaments Center

**N. Joseph Kott III (Confirmed)**

Branch Chief - Materials: Advanced Manufacturing, Army CCDC GVSC

**Phil Burton (Confirmed)** Program Manager - Additive Manufacturing U.S. Army TACOM