

xTechSearch 4.0 Phase III: AUSA Innovators' Corner

Business and Technology Descriptions

Business Name & Logo	Business Description	Technology Description
Battle Sight Technologies  <u>POC:</u> Nicholas Ripplinger Nick@BattleSightTech.com	<p>Battle Sight is a technology commercialization firm focused on commercializing technologies specifically designed for the warfighter, first responders, and emergency management professionals.</p>	<p>Battle Sight has developed a patent pending technology named Falling Saber that combines a lightweight, low profile hardware form factor with proprietary software to deliver real time positional data from the moment assets leave the aircraft until they are covertly recovered on the ground.</p>
Bounce Imaging  BOUNCE IMAGING <small>TACTICAL THROWABLE CAMERAS</small> <u>POC:</u> Francisco Aguilar francisco.aguilar@bounceimaging.com	<p>Bounce Imaging designs and manufactures 360-degree throwable tactical cameras for use by military, police, and first responders of all kinds. Our cameras capture video in a 360-degree range around the sensor, and stitches the images into a panable video feed, instantly accessible to end users. Bounce Imaging is a venture backed start-up, founded at the Harvard Innovation Lab (i-Lab).</p>	<p>Teams facing immediate dangers need a low-cost and easy-to-deploy system to gain vital information to keep themselves and civilians safer. As a tactical throwable camera, our device captures full-360 panoramic video and audio and transmits it in real-time. The panoramic video is stabilized, ensuring the camera does not need a specific up-direction.</p>
DroneShield, LLC  DRONESHIELD <u>POC:</u> Matt McCrann matt.mccrann@droneshield.com	<p>DroneShield is a leading developer and manufacturer of layered Counter-UAS (C-UAS) technology, providing innovative solutions for dismounted, on-the-move, and fixed-site applications. DroneShield specializes in interoperable and modular, multi-sensor counter drone solutions that provide real-time situational awareness allowing users to detect, identify, track, and defeat threats in any operational environment.</p>	<p>DroneShield's technology applies AI deep learning to the Radio Frequency (RF) spectrum which allows users to proactively stay ahead of evolving drone threats by adapting to the underlying commercial capabilities of potential threats, instead of reacting to new threats after they emerge. DroneShield's approach delivers a threat agnostic, plug-in detection capability that can potentially leverage any front end RF sensor to carry out the C-UAS mission.</p>



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FastVDO, LLC  POC: Pankaj Topiwala pankajtva@gmail.com	FastVDO is an R&D company focused on using AI in video communications, including compression, error correction, human computer interfaces, and analytics, including quality analysis. We have taken part in commercial and national video standards efforts for 20 years. Our business model is a mix of funded R&D, product sales and IP licensing. Video is in our DNA.	We integrate advanced AI with known computational features of video to develop state of the art video quality assessment (VQA) metrics. That allows us to compute VNIIRS automatically for ISR video, accelerating turning sensor data to action for time-sensitive analysis. This tech can have far reaching impact on both commercial streaming and broadcast services as well as ISR applications.
FLITE Material Sciences US, Inc.  POC: Daniel Cohen dan.cohen@flite.tech	FLITE is collecting the most innovative techniques in surface functionalization from around the world to protect everyday materials from ice, rust or contaminant fouling, without the use of temporary and toxic coatings. If you have a surface protection problem and you find that coatings solve one problem and cause two others, please contact FLITE.	FLITE Material Sciences is bringing the emerging science of surface functionalization to commercial and military use. Our patented techniques protect everyday materials from rust, ice and fouling, without using temporary and toxic coatings. Your challenge may be aircraft icing, sterile medical instruments, water treatment or field sensors; our method works on almost any material.
GeneCapture, Inc.  POC: Peggy Sammon psammon@genecapture.com	GeneCapture is developing a portable rapid infection detection system for use in austere environments. The diagnostic can screen up to 200 pathogens in less than an hour for less than \$20.	GeneCapture's portable rapid infection diagnostic identifies the genetic signature of the pathogen using direct RNA hybridization.



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Geopipe 	Geopipe is an NYC-based startup using AI to provide rich 3D maps and immersive 3D models of the real world to game and simulation developers. Geopipe makes it possible to immediately know exactly what's in the world, not just how it looks, with no manual modeling and no low-quality photogrammetry. The company has bootstrapped through grants, accelerators, investment, and early adopter customers.	Geopipe's powerful AI-driven technology builds 3D maps and 3D environments of the real world. Geopipe's technology automatically labels every object in the real world from sensor and reconnaissance data, understanding what's in the world, not just how it looks. It generates instantly usable 3D maps and 3D models ready for simulation, training, and mission planning.
Inductive Ventures 	Inductive Ventures, Inc. (IV) is a US-based small business focused on designing and commercializing magnetic brakes and wheels systems for aircraft, rotorcraft, automobiles, trains, elevators and any other system that currently uses carbon brakes. IV is focused on providing its customers with magnetic braking solutions that never wear out or need to be maintained. IV's magnetic brake systems drastically reduces the operational, maintenance, logistic and life cycle costs of the vehicle.	Inductive Ventures' active magnetic brake design provides magnetic braking and electric taxi capabilities to the rotorcraft. IV's braking system is a direct replacement for the carbon/steel brake that is currently used onboard and will fit within the existing spaces. IV's active braking solution provides the rotorcraft the ability to not only brake the aircraft but also taxi the aircraft in arduous environments without the use of the main rotor.
IoT/AI, Inc. 	IoT/AI delivers a sensor platform that fuses cybersecurity, artificial intelligence and edge networking to unlock the power of the edge across harsh IoT, Industrial IoT and Military/Defense environments. Our mission is to amplify situational awareness, cognitive insights and value at the edge of the network. We strive to unlock the Internet of Battlefield Things (IoBT) in austere conditions.	IoT/AI provides an “edge as a service” system that is easy to deploy and will provision real-time monitoring, data collection, distribute AI/ML, collaboration, and decision support. The edge platform supports over 4000 sensors and is an unmatched combination of tactical radio, edge compute, sensor integration, and edge AI/ML into a COTS-based, MIL-SPEC certified, and A2/AD resistant system. LPI/LPD, low RF. Tactical, Maintenance, Training, Health, CBRNE, IoT, etc.
POC: Christopher Mitchell christopher@geopipe.com		
POC: Andrew Wissing andyw@inductivev.com		
POC: JD Stanley jd@iot.ai		

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KeriCure, Inc.  <u>POC:</u> Kerriann Greenhalgh Kgreenha@kericuremedical.com	<p>KeriCure is a woman owned biotech company focused on improving healing and preventing infections for burns and wounds. Our spray on products have protected consumers, animals, and medical professionals from infections since 2013. KeriCure products can be self-administered in austere and multi-domain operating environments, in prolonged field care, and in hospital post debridement to seal and protect.</p>	<p>KeriCure's nanopolymer wound care products provide immediate protection against bacteria, dirt & germs in a simple to use, spray on format. Our low cost, durable, waterproof barriers seal any size & shape wound and protect throughout healing. Additionally, our nanosilver barrier products have added broad spectrum antimicrobial coverage that's non-resistance forming, providing an all-in-one burn and wound care solution that works.</p>
LumiShield Technologies, Inc.  <u>POC:</u> John Watkins watkins@lumishieldtech.com	<p>LumiShield is a start-up company from Carnegie Mellon University and the National Energy Technology Laboratory. Founded in 2014, LumiShield has now grown to 6 full time employees. LumiShield is committed to commercializing new, sustainable, and cost effective aluminum oxide coatings for the US military, oil & gas industry and automotive industry with upcoming demos scheduled for 2020.</p>	<p>LumiShield's first product, Lumidize®, is an aluminum oxide coating for metals that improves both paint adhesion and corrosion resistance. This coating will displace the use of phosphate and chromate treatments on metal surfaces as to improve sustainability of coatings in military and commercial applications without loss of performance or increased cost.</p>
Lynq Technologies, Inc.  <u>POC:</u> Matthew Misbin matthew@lynqme.com	<p>LynQ is a venture back startup that is changing how data is communicated, allowing any device to transmit low-bandwidth data for miles without cellular networks or infrastructure -- in a manner that's uniquely difficult to intercept and detect. A new communication standard, capable of 10x the distance of current standards while offering significantly greater reliability, privacy and security</p>	<p>LynQ is a lightweight, low cost, RF quiet, and jamming resistant standalone location device with a carabiner that improves situational awareness, squad vector logic/formation, and allows operators to tag/track/locate anyone or anything for miles like a sixth sense - NO networks, apps, phones or maps required.</p>

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MEI Micro, Inc.  POC: Louis Ross ross@mei-micro.com	<p>MEI Micro is developing next-generation dual-use MEMs IMU sensor technology for assured position, navigation and timing (A-PNT) for inertial navigation systems.</p>	<p>MEI Micro has developed a proprietary 3DS (3D System) MEMS fabrication platform that enables designs of high performance lowest cost inertial sensors (as well as other MEMs sensors) that can be scaled to provide tactical, near-navigation, and navigation performance while meeting crucial size, durability and cost requirements for Low CSWaP.</p>
Multiscale Systems, Inc.  POC: Jesse Silverberg js@mss.science	<p>Multiscale Systems is a manufacturing firm developing mechanical metamaterials – a class of lighter, stronger, and more highly-functional advanced material solutions – to enable next-generation impact protection.</p>	<p>Mechanical metamaterials are next-generation class of structured materials with greater performance metrics on energy-absorption, vibration control, and reduced mass density. Our technology is directly applicable to the development of Soldier protective systems including NGCV crush tubes, long-range missiles impact mitigation, load footprint reduction in aircraft, and mid-sized JPADS.</p>
NeuroFlow, Inc.  POC: Chris Molaro chris@neuroflowsolution.com	<p>NeuroFlow is a Veteran co-founded healthcare technology and analytics company enabling behavioral health access and engagement to bridge the gap between mental and physical health. Our mission is to be a resource and asset to health care providers in their tireless pursuit of creating a better world, by providing the best mental health solutions to those in need.</p>	<p>NeuroFlow is a self-service tool that allows soldiers to engage with behavioral health resources and evidence-based content providing more efficient access and engagement. Automated pathways and population risk stratification allow Soldiers to get the right care in a timely manner to improve psychological wellbeing.</p>

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NanoSystems Laboratory (nLAB)  <i>Future is Diamond.</i> <p>POC: Kamran Forghani forghani@uwalumni.com</p>	<p>NanoSystem Laboratory (nLab, LLC) is focused on R&D and commercialization of next generation semiconductor materials and devices for electronic and opto-electronic applications. Its IP includes diamond growth, epitaxial growth of semiconductors, nano- and micro-fabrication.</p>	<p>Monolithical integration of lab-grown diamond into state-of-the-art semiconductor devices boosts their effective thermal conductivity, resulting in a self-cooling of the active layers. Therefore, the devices can be run lower temperatures, at higher power densities, have a better packing factor as well as a longer life-time/longevity.</p>
Novaa, Ltd  <p>POC: Markus Novak markus@novaarf.com</p>	<p>Novaa is leading innovation in wireless radio frequency solutions. As a recognized expert on antenna systems and other RF innovations, we are tackling the toughest problems in electromagnetics including ultra-wideband (UWB) antennas, mass scaleable radars, assured Position, Navigation and Timing (PNT), electronic scanning arrays, and same frequency simultaneous transmit and receive capabilities.</p>	<p>Novaa has developed an ultra-wideband (UWB) antenna capability, enabling multi-band operation across the C, X, Ku and Ka SATCOM bands. Based on COTS components, this low cost solution powers high bandwidth, multi-functional operations, replacing numerous separate antenna systems with a single, low-profile aperture conformal to operational platforms.</p>
Passenger, Inc.  <p>POC: Ron Maynard rsmpassenger@gmail.com</p>	<p>Passenger, Inc. is dedicated to producing the finest total immersion XR technology on the market. We do this by harnessing the power of MEMS technology to miniaturize proven projection devices that can deliver an ultra-realistic, wide field, high contrast and comfortable XR experience.</p>	<p>We address four major flaws of all current AR/VR hardware, including image lag, narrow field of view, lack of depth perception and bulky headset designs. We do this by miniaturizing a scanning system that is no larger than a grain of rice, and project lag free, ultra-wide field, full focal depth images directly onto the retina.</p>



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Primal Space Systems  PRIMAL SPACE™ POC: Barry Jenkins barry.jenkins@primalspacesystems.com	Primal Space Systems is a software development company in Raleigh NC. We develop GPEG encoder, client, and server software for efficient delivery of massive 3D data sets. Applications include game streaming, streaming of new types of cable and OTT content, as well as streaming of 3D geospatial and navigational data for sensor-based navigation.	3D Tiles Nav is an open source software technology for rapidly processing and disseminating 3D reconnaissance data acquired in complex, densely occluded operating environments. The process results in a navigation-centric restructuring of massive 3D geospatial data set which enables more efficient data delivery over bandwidth-constrained tactical networks.
Vita Inclinata Technologies  VITA INCLINATA	Vita Inclinata Technologies is developing next generation rescue systems for the military and commercial marketplaces. Vita's Load Stability System (LSS), is the first and only active system that completely stabilizes the oscillatory swing, and rotational spin suspended loads undergo. The solution is being applied to modernize & stabilize helicopter hoisting and sling load missions.	Vita's Load Stability System Platform is an active suspended load stabilization device that addresses lack of payload stability in the global helicopter and crane marketplace. At a high level, the LSS senses the environment, fuses the data through Vita's proprietary stabilization algorithm, then articulates high performance electric ducted fans to counteract all motion the suspended hoist cable undergoes. Vita is configuring solutions for the military Search and Rescue (SAR) and helicopter external cargo mission sets.

xTechSearch 4.0 will be featuring the Phase III semi-finalists at the Innovators' Corner in North Hall 2 from 17-18 March. Each small business will have an opportunity to display their technology concepts and pitch over the course of two days.

Each day ten (10) small businesses will provide a brief that is open to the public and will be displaying their technology concepts the same day. See the Innovators' Corner agenda for more details.