



CAPABILITY STATEMENT

UEI: CVNALNBF8Z15
DUNS: 079398783
CAGE: 74Z22
STATUS: Economically Disadvantaged Woman-Owned Small Business; Certified HUBZone Small Business
YEAR INCORPORATED: 2014
STATE & TYPE: New Mexico, C-Corp

CURRENT CONTRACTS AND PROJECTS

NASA Phase I STTR
Number: 80NSSC210372
Scope: Digital Twin Data Acquisition System for Institutional Facility Management

US Navy SBIR Phase I – ADAPT
Number: N68335-20-C-0454
Scope: UAS and Sensor Suite Development for Naval Depot Modernization and Sustainment

MassChallenge/IBM Artificial Intelligence (AI) Mentorship
Number: Mentor Relationship/IBM Partner
Scope: IBM Maximo Integration with ETV’s KeenAI and Trusted AI Standards and Processes

US Navy SeaPort-e NxG
Number: N00178-19-D-7583
Scope: Engineering and Program Management Services

NASA Space Act
Number: SAA2-403095
Scope: Research, Development, Testing, and Evaluation of a UAS Traffic Management System

PAST PERFORMANCE
US Special Operations Command
Number: H-92240-17-P-0191
Scope: Two Custom-Built UAS with Visual and Thermal Sensors and Day One Training

US Small Business Administration
Number: SBAHQ-14-C-0010
Services for the Autonomous and Unmanned Systems Regional Innovation Cluster

Lockheed Martin
Number: 6574003595
Scope: Human Systems Integration Training

Department of Energy
Number: DE-NA0003331
Scope: Robotic Target Training Vehicles

US Navy SeaPort-e Prime
Number: N00178-15-D-8188
Scope: All 7 Zones and 22 Functional Areas

EMERGING TECHNOLOGY VENTURES (ETV) develops integrated, cross-domain autonomous system solutions and data analytics in the precision agriculture, critical infrastructure inspection, renewable energy, public safety, and Defense sectors.

COMMITTED EXPERTS Our leadership team has over 100 years of combined experience in robotics and autonomous systems across the Department of Defense and commercial industry in research & development, program management, manufacturing, and life-cycle management.

MULTI-DISCIPLINED TEAM Our engineering team provides the full spectrum of electrical, software, manufacturing, and system engineering support for a customer-centric design approach.

LEADING-EDGE TECHNOLOGY Our team maintains strategic relationships with academia and the national laboratories to commercialize the latest enabling technologies for continued capability growth in autonomous operations and data analytics.

MANAGEMENT TEAM

Deborah Hudson
President and Founder

Derek Chang
Chief Development Officer

Eugene C. “Cliff” Hudson
CEO and Founder

Ziad Arafat
Lead Software Development

Gary Bullock
Chief Engineer

Bradley Ross
Lead Data Scientist

Amanda Hudson
Digital Media Specialist

Carter Taylor
Manufacturing and Operations Manager

NAICS CODES

- 541330 Engineering Services
- 541511 Custom Computer Programming Services
- 541512 Computer Systems Design Services
- 541611 Administrative Management and General Management Consulting
- 541690 Other Scientific and Technical Consulting Services
- 541715 Research and Development in the Physical, Engineering, and Life Sciences (Except Nanotechnology and Biotechnology)
- 336411 Aircraft Manufacturing
- 336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing



PRECISION SENSING AND ANALYTICS IN COMPLEX ENVIRONMENTS

KeenAI provides end-to-end autonomous workflow services (sense-understand-decide-act) to conduct multi-modal sensing and fusion to build 3D/4D digital twin visualization; AI/ML predictive analytics; hybrid computing (edge/cloud); and multi-echelon mission planning/execution in complex environments with scalable Human-Autonomy Teaming (H²AT). Our baseline, extensible KeenAI architecture and technology allow us to adapt and apply solutions to a wide range of market opportunities.

FOR AGRICULTURE

KeenAI's AoT environment transforms DRIP into an information-rich environment. KeenAI's sensing improves the zone stress map with detailed 2-4cm causal analytics. The farmer receives notifications with severity alerts and in-depth scouting reports. Certified Crop and Pest Control Advisers will utilize and respond to reports with treatment prescription options for timely, actionable, field-ready response.

FOR AEROSPACE

KeenAI provides unmanned aerial system (UAS) inspection, multi-modal sensing, and predictive analytics at the edge to reduce inspection time to support pilot safety walk around and unplanned maintenance which costs commercial aviation over \$20 billion annually. With each inspection, the aircraft updates its digital twin model to support change detection in future inspections.

FOR ENERGY

KeenAI's UAS inspection and predictive analytics improve wind turbine inspection resolution and lower O&M costs from \$10MWhr to \$5MWhr for an aging wind turbine infrastructure. KeenAI transitions maintenance strategies from service-life to condition-based component maintenance based on remaining-useful-life (RUL) predictions. KeenAI's analytics will utilize field performance data and RUL predictions to simulate and analyze new component designs.

FOR INFRASTRUCTURE

KeenAI provides a "Digital Twin (DT) Data Acquisition System for Institutional Facility Management". The innovation addresses Industry 4.0 digital transformation initiatives in Building Information Modelling (BIM) and Facility Management (FM) which have created critical demand for up-to-date digitized building assets for effective implementation in predictive, condition-based maintenance (CBM) strategies in FM. The use of autonomous, multi-modal systems and analytics to create DTs representing near real-time status of the built environment for FM offers an opportunity for responsive, labor efficient CBM.

FOR DEFENSE

KeenAI's H²AT supports scalable distributed operations including Agile Combat Employment (ACE), Distributed Maritime Operations, and Expeditionary Advanced Base Operations faced with reduced manning, multi-capable warfighters. Digital twin allows 4D representation of the battlespace with dynamic updates from deployed assets to support mission (re-)planning and execution in complex environments. KeenAI's flexible fly-away capability supports integrated missions including logistics, security, force protection, maintenance. Trusted AI actively incorporates battlespace lessons learned to posture decision aids for evolving threat Tactics, Techniques, and Procedures (TTPs).

KeenAI Autonomous Workflow

