



Athena Sciences Corporate Brief

Athena Sciences Corporation

1000 Technology Dr. #1219

Fairmont, WV 26554

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Who We Are



Athena is TRUSTED

- 99.8% commercial product satisfaction
- 100% success in contract deliveries (20+) within budget
- Solution development for DHS, DoD, IRS, NYC, VA & WV

Athena is COST-EFFECTIVE

- Multi cost center organization enables low price services LOB
- Agile engineering and flexible designs
- Completion of Afghan biometrics system under budget

Athena is INNOVATIVE

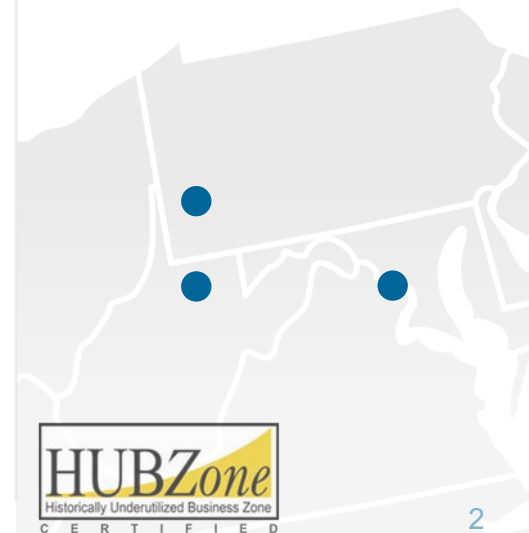
- 1st cloud-ready biometrics examination product
- Selected by Army for artificial intelligence R&D project
- 1st US big-data biometrics architecture
- AI-based facial recognition technology

Our Mission

As a partner, we work to deliver trusted, cost-effective, reliable, and innovative solutions for mission-critical problems.

Our Locations

Fairmont, WV
Pittsburgh, PA
D.C. Metro
Kabul, Afghanistan



What We Do

Mission Critical Software Systems:

- Biometrics Systems Integration
- Consulting (Technology R&D and IV&V)
- Enterprise Systems Development
- Information Technology Operations

Software Products:

- Themis™ Biometrics Examination Suite
- ScanPass™ Passport Scanner
- CivilWare™ Family Law Suite
- Asset Management Information System (AMIS)



Dan McCaugherty – President & CEO

- Space Shuttle Flight Control Engineer, *Rockwell* (1986)
- Space Station Software Verification Program Manager, *Intermetrics* (1994)
- General Manager for NASA software verification Line of Business, *Titan* (180 employees) (1999)
- Vice President Systems Engineering, *Ultra Electronics* (2001)
- *Athena* Founder and CEO (2009)
- 34% average CAGR as line of business manager over last 20 years (3 corporations)

Highlights

- Solution Architect for \$400M+ in federal contract awards since 1994 (NASA, NETL, USAF, Army, DOT, DHS)
- Initiated line of business for forward deployable Link-16 military tactical communication systems
- Developed 6 commercial software products (*LawTech*)
- Led international research effort to define future of computing in smart power grid (6 DOE labs, 12 universities)
- Developed roadmap for Defense biometrics system (*Athena*)

Dan Nawrocki – Vice President & CTO

- Space Shuttle cockpit landing sim (*NASA*)
- DOD Automated Biometrics Identification System (ABIS) software developer (*Northrop Grumman*)
- Architect, NASA IV&V avionics testbeds (JSTAR), 2012 NASA Software of the year finalist (*Athena*)
- System Architect on DoD, Afghan, and Iraq ABIS Programs (*Athena*)
- Innovator, Themis™ Biometrics Examination Workstation (*Athena*)
- Chief Engineer, Afghan-Iraq ABIS systems



McCaugherty



Nawrocki

Services

Services (DoD ABIS, DHS HART, Afghan ABIS)

- ABIS system design, development, and integration
- Technology assessment and selection
- System interfaces (FBI NGI, DoD ABIS, DHS HART)
- Matching technology analysis and tuning
- System testing – transaction modeling, performance testing
- High availability system operations
- Fixed and mobile biometrics technology integration

Standards Development

- EBTS

Technology Development

- AI-based face recognition/extraction from video
- AI-based biometric matching
- Real-time identification of listed (watchlist, whitelist) faces in video



Joined Center for Identification Technology Research (CITeR) as an industry affiliate in 2019.



Selected for 2020 DoD SBIR Phase I award for “Every Camera a Biometric Checkpoint” topic.

Technology Benchmarking and Roadmaps

- Aerospace - NASA
 - Verification and validation
- Energy - IEEE
 - AI-based control
 - Modeling, simulation, and prognostics
 - Cyber security
 - Power grid management and control
- Biometrics - DoD, CTeR (DoD, FBI, DHS)
 - Modality technology
 - Transaction architectures
 - Intelligence Analysis



Led IEEE international research project on the future of computing in smart power grid



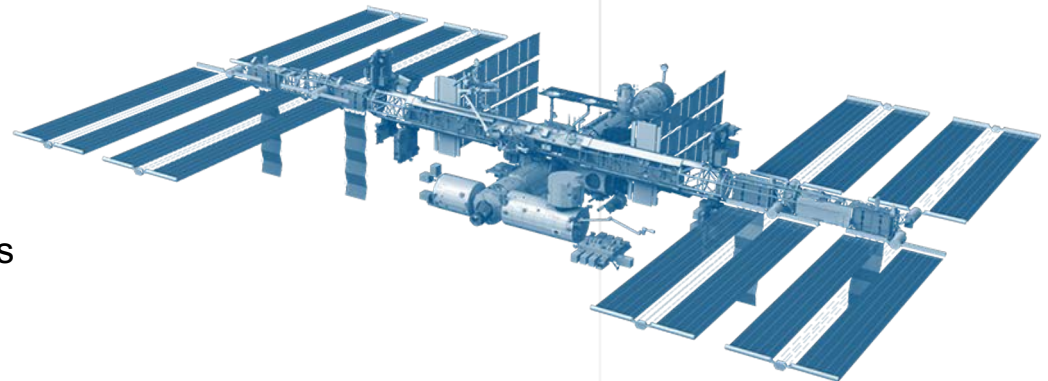
Developed technology roadmaps for DoD biometrics.

Full Life Cycle Software IV&V

- Requirements and design analysis
- Software and implementation analysis
- Information assurance analysis
- Test coverage analysis and independent testing

Test Automation Frameworks and Sim-based Testbeds

- Cyber-physical embedded systems
 - Spacecraft
 - Transportation systems
- Command and Control
- Enterprise Systems
 - Biometrics
 - Web-based transaction systems



Proven results...

7 NASA registered inventions and 1 patent.

NASA “Software of the Year” Finalist.

Simulators developed for spacecraft systems, rail transportation control, and biometric transactions.

Continuous integration / continuous development (CICD) pipelines for government enterprise systems.

Skilled at designing and developing systems with:

- Micro-service architectures
- Effective UX design
- Hadoop big-data high speed analytic architectures
- AI integration into operational workflows

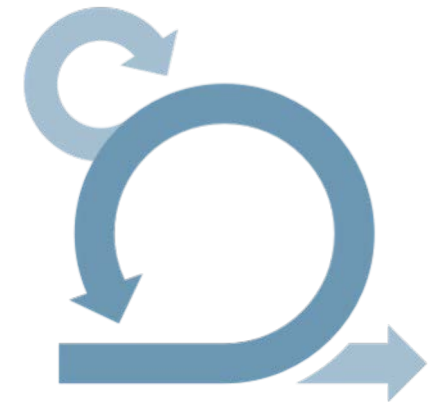
Systems optimized to provide:

- Elastic response to computing loads
- High availability and security
- Cloud-deployment readiness

Supported missions for DoD, DHS, IRS, DoE, USPTO, and New York City's MTA

Agile methods...

We employ agile development methods that have enabled us to deliver within budget to every client.



ITIL Certified professionals deliver lean and effective support with a “right-sized” approach

Implement agile Dev(Sec)Ops methods for rapid response to evolving needs

Leverage Atlassian tools to automate workflows, control configurations, and manage help desk services

Proactive support to CivilWare™ customers since 1997

- Cloud-based application deployment and license management
- Responsive help desk services with high satisfaction ratings
- Agile implementation of legislative changes and complex financial computations

Proven results...

Athena’s proactive solutions for continual service improvement have resulted in high-quality IT support for federal and commercial clients.

75% Reductions to Operating Costs

Train Control Datacenter

50% Reductions to Hardware Costs

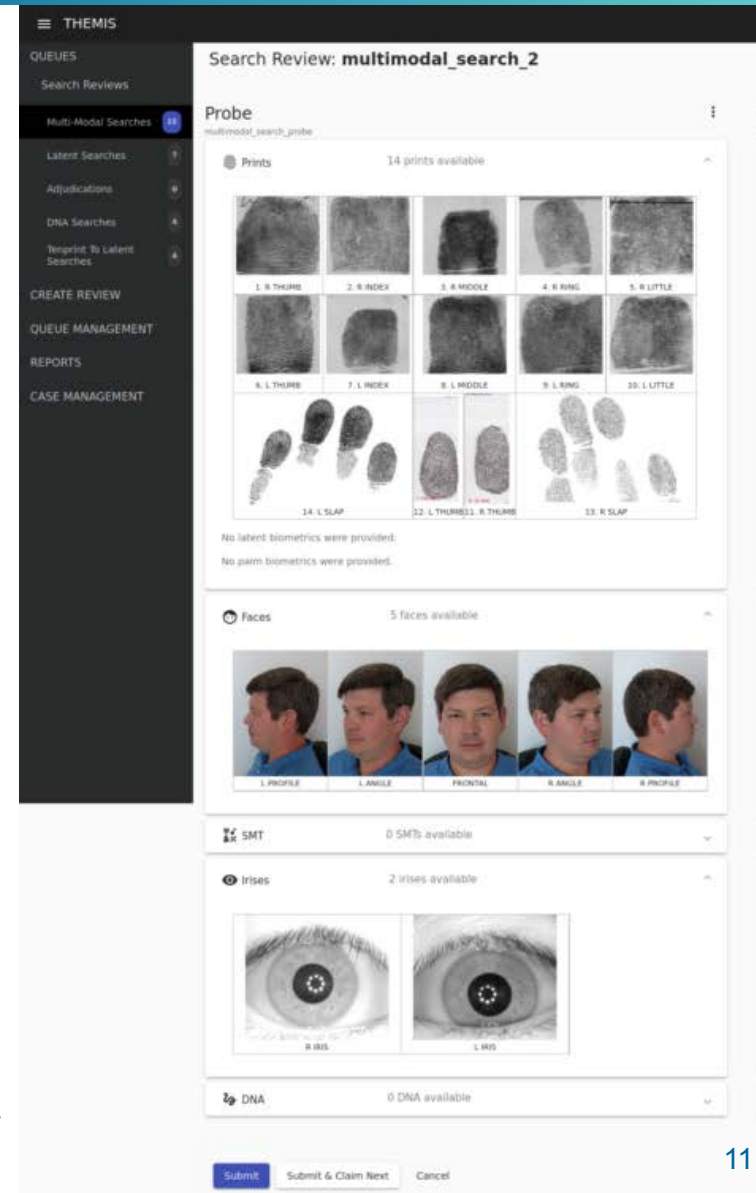
IRS Enterprise System

2x Speed in Deployment of Software Changes

DoD AI-ABIS

Applications

Biometrics Data Systems (DoD, DHS)
Judiciary Civil Law (VA & WV Courts)
Rail Transportation Control Systems (NYC)
Spacecraft Simulators (NASA)
Cloud-based Enterprise Systems (IRS)
Mobile Applications



THEMIS

QUEUES

- Search Reviews
- Multi-Modal Searches **11**
- Latent Searches
- Adjudications
- DNA Searches
- Reprint to Latent Searches

CREATE REVIEW

QUEUE MANAGEMENT

REPORTS

CASE MANAGEMENT

Search Review: **multimodal_search_2**

Probe
multimodal_search_probe

Prints 14 prints available

1. R THUMB 2. R INDEX 3. R MIDDLE 4. R RING 5. R LITTLE
6. L THUMB 7. L INDEX 8. L MIDDLE 9. L RING 10. L LITTLE
11. L SLAP 12. L THUMB 13. R THUMB 14. R SLAP

No latent biometrics were provided.
No palm biometrics were provided.

Faces 5 faces available

1. PROFILE 2. ANGLE 3. FRONTAL 4. ANGLE 5. PROFILE

SMT 0 SMTs available

Irises 2 irises available

R IRIS L IRIS

DNA 0 DNA available

Submit Submit & Claim Next Cancel

Biometrics: ANSI NIST ITL-2011 (FBI EFTS/EBTS, DoD EBTS), Idemia, Griaule, Lakota Ani, Aware

AWS Cloud and AWS GovCloud

Big Data: Hadoop, Kafka, Spark, NoSQL, GraphDB

Artificial Intelligence: Neural Nets (CNN, RNN), NLP, LDA

Information Technology: SOA, Microservices, VMWare, VirtualBox

Databases: Oracle, PostgreSQL, MYSQL, MongoDB, Neo4J

Mobile: Android, PhoneGap

Languages/Tools: C++, C, C#, Java, Go, AngularJS, VB, Python, Perl, Ruby, Expect, Capybara, Selenium, Cucumber

Middleware: RTI NDDS, NASA ITCSB, JMS

Products



Themis™: Biometrics examination workstation suite

- Deployed in DoD ABIS environment
- Matching vendor agnostic and cloud-based
- Multi-modal (fingerprints, iris, face, SMT, DNA, etc.)



ScanPass™: Mobile passport reader

- Uses image capture to read MRZ code, unlock passport data in NFC chip
- Use for In-situ identity cross-check, Military, US Borders
- Android device compatible



LawTech CivilWare™: Family law suite

- Child support, spousal support, support arrearage, equitable distribution, income/expense disclosure
- Produces court-accepted reports following state formulas
- Supported 1000+ customers since 1997 with 99.8% satisfaction rating



Asset Management Information System (AMIS)

- Manage federal government seizure and sale of real estate property
- AWS GovCloud based



Proven Partners in Mission Success

How can we help you achieve your mission?

www.athenasciences.com | contact@athenasciences.com | 304-842-0179