Davidson Technologies:
A Medium Sized Business Experience
with DFARS 7012/NIST 800-171
Davidson Technologies

- Founded in 1996 by Dr. Julian Davidson
- “Father of Missile Defense in America” – Sen. Jeff Sessions
- After Dr. Julian Davidson death in 2013 Dr. Dorothy Davidson stepped in to run the company as a woman-owned small business

Our Capabilities:

- Missiles
- Aerospace
- Cyber
- Intelligence

- 2016 Nunn-Perry Award winner with Northrop Grumman on the Mentor-Protégé Program
Cyber is a core capability, so how does DTI’s internal cyber stack up?

If it ain’t broke...
“The Department [DoD] is now realizing that there is a plethora of data that is not classified, but that can provide potential adversaries with a wealth of information about our operations and systems.” – Mr. Lee Rosenberg, Director MDA OSBP from OSBP Quarterly Newsletter | January 2016

- 51 NIST 800-53 Controls
  - AC: Access Control
  - AT: Awareness Training
  - AU: Auditing and Accountability
  - CM: Configuration Management
  - CP: Contingency Planning
  - IA: Identification and Authentication
  - IR: Incident Response
  - …
The Primary Goals

• Provide a secure computing environment to meet or exceed all regulatory compliance requirements

• Allow for easy and seamless access to data and processing capabilities for all employees

• Ensure data integrity and confidentiality by bringing the users to the data, instead of sending the data to the users

• Maintain modularity for easy and affordable scalability

• Operate on a minimal footprint, both environmentally and operationally
ACSIS is a secure virtualized cyber framework enabling end users access to network resources from anywhere with any device while maintaining regulatory compliance

- An investment by Davidson Technologies to design a multi-purpose/multi-application system capable of meeting high end processing, big data, and regulatory compliance

- Designed and implemented by DTI Cyber/IT professionals with core competencies in systems and cyber engineering with DoD and other regulatory domain knowledge
ACSIS - Certified Engineers and Architects
ACSIS - Traditional Engineering Drove Design and Documentation

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<th>Project Initiation</th>
<th>Preliminary Engineering</th>
<th>Specs, &amp; Est.</th>
<th>Construction</th>
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<td>Concept of Operations</td>
<td>System Requirements</td>
<td>Conceptual Design</td>
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<td>Subsystem Verification</td>
<td>Test / Pilot Program</td>
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Integration and Re-composition
Decomposition and Definition
ACSIS - Continuous Life Cycle Development

- Requirements
- Specifications
- Design
- Implementation & Integration
- Test/Pilot
- Deployment & Configuration
- Maintain & Improve
- Validate & Verify
Bring the user to the data instead of the data to the user.

Smart Phone

Traditional Desktop

Zero Client

Laptop

Tablet

Virtual Server Infrastructure

Hyper Converged Modular Hardware

Virtual Desktop Infrastructure
## ACSIS - Why VDI? (PROs Vs. CONs)

<table>
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<tr>
<th>PROs</th>
<th>CONs</th>
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<tr>
<td>• Data Protection</td>
<td>• Eggs all in one basket</td>
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<tr>
<td>• Desktop Configuration Control</td>
<td>• Physical Security</td>
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<tr>
<td>• Vulnerability Management</td>
<td>• Bandwidth and Storage</td>
</tr>
<tr>
<td>• Patch Management</td>
<td>• IT becomes 24/7 (no network = no infrastructure)</td>
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<tr>
<td>• License Management</td>
<td>• Subject Matter Experts</td>
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<tr>
<td>• Virtual Application Delivery</td>
<td>• TDY with no network</td>
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<td>• Easy Resource Allocation</td>
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<td>• Continuous User Experience</td>
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<td>• Access from Secure Locations</td>
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<tr>
<td>• Easy Remote Access</td>
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<tr>
<td>• ROI for End Point Devices</td>
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<tr>
<td>• Revitalization of IT assets</td>
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<tr>
<td>• Centralized Desktop Support</td>
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<td>• BYOD Policy Enforcement</td>
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• Maintain Interoperability Chart for all Virtualization Vendors’ Software and Versions.

• Provide users an opportunity to learn and understand VDI

• Be careful of the bleeding edge… It can hurt

• Continue to evaluate new products

• Invest in the appropriate monitoring tools and dashboards
Why ACSIS?

- Economical and Modular for Easy Scalability
- Centralized Management and Configuration
- Layered Security (Security In-Depth)
- Ease of Access and Usability
- Minimal Footprint
ACSIS - Recurring Questions & Enduring Issues

- Is it CUI or UCTI or CDI or...?
- What is considered CUI/UCTI/CDI...?
- Do we have CUI/UCTI/CDI?
- Who is certifying / accrediting that systems are compliant?
- Will our self NIST 800-171 assessment suffice?
Secure Cyber Supply Chain

Offering Suppliers an Integrated Program Environment (IPE)

IDE - Familiar Construct

Classified Environment - Familiar Construct

IPE using ACSIS - An Analogous Model to Control/Secure Your Program-Focused ‘Network’

Customer, Company, Team, Coalition Users per Permissions

IPE Enabled by ACSIS, a Foundational, Secure IT/Cyber System
ACSIS Potential Applications

Big Data
IT Cyber System
Training System

System of Systems (SoS) M&S, T&E
DoD Program Applications
Warfighter Applications
ACSIS Potential Applications

Backup Services

On-Site Contractor
Restricted Equipment

Real-Time Monitoring

Software Development Lab
For additional information please contact:
ACSIS@davidson-tech.com

Collaboration to Develop
IP/Discriminator

Small Business
Partnerships

Program
Development
Support

Architecture and
System Development

Comprehensive
Regulation Knowledge

Life-Cycle Value
Added

Opportunity
Shaping

Customer
Relationships

Vendor
Relationships

IAMD/BMDS Domain
Knowledge