Software Engineering Opportunities At MSE

September 13, 2013
Agenda

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• Domain Experience
• Software Development Environment
• MSE-Rowan Partnership
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Who Is Mission Solutions Engineering (MSE) ?

• MSE is a **full-service** systems and software engineering provider.
  – Premiere software provider for the Aegis Weapon System (AWS)
  – Support the full spectrum of life-cycle software development with functional expertise in all areas.
    • Requirements specification and analysis to design, coding, integration testing and installation support

• History
  • Our team began operations as part of the ASMS (now Aegis) radar development program in 1970 as an operating unit of Computer Sciences Corporation (CSC)
  • MSE is currently a subsidiary of ASRC Federal Holding Company whose parent company is Arctic Slope Regional Corporation (ASRC), an Alaska Native Corporation
    • Privately held company supporting over 11,000 Inupiaq shareholders
Customers and Agencies Supported

• MSE Customers
  – Lockheed Martin Mission Systems and Training (MST)
    • Surface Navy and Ballistic Missile Defense
  – Lockheed Martin Aerospace & Defense
    • F-35 Joint Strike Fighter (JSF)

• Agencies Supported
  – United States Navy and its Foreign Military Sale (FMS) partners
    • Littoral Combat Ship (LCS), DDG-1000 Destroyer Program
    • Aegis Weapon System
  – United States Coast Guard (USCG)
    • Deepwater System
  – Missile Defense Agency
    • Aegis Ballistic Missile Defense
    • Aegis Ashore
An Overview of the MSE Team

• **400+ Employees Dedicated to Accomplishing MSE’s Core Mission**
  – All employees possess U.S. Secret Clearances
  – 57 employees have attained advanced degrees

• **249 Employees Develop the Software that Drives the Navy’s Aegis Weapon System (AWS)**
  – Design, Code, Test and Integrate over 23 million lines of code within the AWS system domains
AWS System Domain Expertise

• Extensive development and test experience with numerous system domains
  – Command, control, communications and computers (C4ISR)
  – Situational awareness and operator support systems
  – Weapons control and management
  – Sensor management
F-35 Joint Strike Fighter

- MSE currently provides software developers and testers at the Lockheed Martin Aero facility in Fort Worth T.X.

- MSE augments the LM Aero team in the following development area:
  - Core Processing Services
  - Fire Control/Navigation
  - Pilot Systems Display
Expert Developers Augmented by Automation and Tooling

- **Model-Based Requirements Management and Code Development**
  - Rational Rhapsody/Gateways, MagicDraw, and DOORS, Open Source and commercial UML toolsets
  - Agile Model Based development using UML

- **Software development tools**
  - Integrated Development Environments (Eclipse, Netbeans)
  - Web-based approaches, such as JSF, J2EE, JavaScript, and ASP
  - Modern computer languages such as C, C++, C#, Java SE, and Java EE
  - xUnit unit test frameworks (cppunitlite, jUnit)

- **Multi-level testing and virtualization capability**
  - Desktop test environments and configurations provides a high degree of quality assurance for developed components prior to testing at integration test sites
MSE/Rowan Partnership

- MSE/Rowan Project Collaboration
  - MSE launched a collaboration with Rowan University Department Of Computer Science in Jan 2010
  - Work study program provided graduate and under-graduate students hands-on software engineering experience on MSE provided projects
  - Students are exposed to full software development life-cycle in addition to working within cost and schedule constraints
  - MSE collaboration leadership establishes the goals of each project providing feedback through an agile planning approach
  - Dr. Baliga, Dr. Hnatyshin and Dr. Kay guide and support the collaboration student team

- In House Rowan Computer Sciences Masters Program
  - Rowan faculty currently teach one graduate class per semester (including summers) in the training facilities at MSE
  - Program is facilitated by Dr. Rusu
  - Gives our staff easy access to additional coursework to further enhance their careers
  - MSE has an educational assistance program that includes reimbursement of expenses for approved degree and certification programs
MSE Employment Opportunities

• MSE is looking for dedicated and highly motivated December 2013/May 2014 graduates willing to join a diverse development team as entry level software engineers

• Since 2008, MSE has hired 25 full-time Rowan CS graduates
  – Rowan has done a superb job of equipping high quality individuals to transition to the work force

• In addition to full-time hires, MSE has brought on 6 interns/casual employees from Rowan

• Moorestown, N.J.
  – AEGIS CSEA
    • MSE recently won a 10 year contract to support the next generation of AEGIS development
    • Developers are being sought to support this effort

• Fort Worth, T.X.
  – F-35 Fighter Aircraft software development and test support
Rowan Alumni

Kim Davis
- MBA (2007)
- Started as part of the development team in August, 2004
- Transitioned to management in May, 2009

Ben Hample
- Computer Science (2008)
- M.S. in C.S. (2013)
- Started as part of the development team in December, 2008
Your MSE Contacts

- To submit a resume or if you have any further questions, please use the following contact information:
  - Kim Davis
    - E-mail: Kimberly.Davis@missionse.com
    - Phone: 856-291-2225
  - Chris Corvo
    - E-mail: Christopher.Corvo@missionse.com
    - Phone: 856-291-2150

- For more information about MSE, please visit our website at www.missionse.com