



## **Developing the 21st Century Defense Workforce**

The Rhode Island Governor's Workforce Board has strengthened workforce development opportunities related to the defense industry through their support of the Defense Industry Partnership. This has included workforce development efforts associated with maritime cybersecurity and trade occupations critical to Electric Boat. The Southeastern New England Defense Industry Alliance (SENEEDIA) is the lead organization for the RI Defense Industry Partnership.

### **Maritime Cybersecurity**

Many companies large and small recognize that as technological opportunities have multiplied in recent years, so too have cyber threats to both the private and public sectors across all industries. SENEEDIA is in a unique position to observe the implications of national and state policies surrounding unyielding cybersecurity threats related to the maritime environment. Over the past several months, SENEEDIA has researched Rhode Island's existing cyber response capabilities in the context of national trends and models, and we are taking a number of important steps to make Rhode Island more competitive in this area.

In conjunction with Raytheon, SENEEDIA has created a maritime cybersecurity practicum program, which provides experiential-learning opportunities to undergraduate- and graduate-level students from Rhode Island universities. Made possible with targeted training grants from the RI Governor's Workforce Board, this program has been a huge success, allowing Rhode Island's brightest students to get the integrated training and experience they need while still pursuing their degree. These types of efforts to integrate an up-and-coming skillset into all relevant industries is key to making sure Rhode Island stays on the cutting edge in terms of worker skills.

The impact of the cybersecurity practicum can be seen through the detailed experiences of the Fall 2013 interns. These students are studying at the University of Rhode Island, Roger Williams University and Salve Regina University. Their assessment of the positive impacts from the internship include:

“My internship included experience at Raytheon and the Rhode Island State Police under SENEEDIA. Throughout the semester, I acquired skills in the following areas; network forensics, technical reports writing, IDS/IPS device installation, E-Mail Headers discrepancies, HTML coding, and presentations. This experience has proven invaluable as it provided me with practical skills that are directly applicable to jobs. As a result, I

have updated my resume with credentials that separate me from the pack when applying to jobs.”

“Interning at Raytheon was a great opportunity. I was able to learn new things about Cyber Security and information security I never knew before. These new skills were not just handed to me; I had to work for them. One of the highlights of the internship was that I was able to construct a technical report with a fellow intern. The technical report was based on web logs of a certain IP range. From there we had to do extensive open source research on the company that the IP range was related to and what they might be looking for on the Raytheon website. At the completion of the technical report, I felt accomplished. I have never written a technical report prior to this internship. The feedback that I received from my supervisors’ was very encouraging.”

“This internship has been a wonderful educational experience for me. During the course of my internship, I have been able to explore software development and cyber intelligence. I assisted two other interns in analyzing web logs and crafting an intelligence report based on those logs. The highlight of my internship so far was writing a report on a new type of malware called CryptoLocker. This report was widely distributed, and I was informed that my report had helped a company in the UK to identify a host on their network infected with CryptoLocker! It was amazing to see how quickly my contributions were applied; it has been an affirming experience for me to pursue a career in industry after I receive my B.S. in Computer Science this coming May.”

“Through my internship, I was able to gain practical experience from both Raytheon and HCH Enterprises which hosted my internship this semester. During my experience at Raytheon I was able to use open and private source intelligence to create a report of current threats to the company. I also learned the importance of looking at discrepancies and malicious activity indicators on email headers. I was able to successfully work on projects for HCH, such as installing, configuring, maintenance, and updating different security items. I was also able to incorporate both my researching and digital forensics skills in order to create a presentation on information security techniques to personal and small business clients at HCH. By having the diverse experience attained from both companies I will be able to teach basic through advanced information security techniques for the non-technically savvy user. I can also provide a different way to research and analyze large amounts of data to put a presentation together for various targeted audiences that may be more beneficial to a company. “

Another important step forward will be developing The Maritime Cybersecurity Center of Excellence, a formal public-private partnership that would work with industry, academia, and government to find innovative and cost-effective solutions for national and international maritime cybersecurity needs of business and government. With its strong defense sector, critical port infrastructure, ideal coastal location, and nationally recognized cybersecurity educational programs, Rhode Island is uniquely positioned to provide a comprehensive, innovative approach to maritime cybersecurity research.

Rhode Island is lucky to have a federal congressional delegation that has made Cybersecurity readiness and innovation a priority throughout their careers. Congressman Jim Langevin in particular has been a leader in Congress on this issue for years, sponsoring the first piece of comprehensive cybersecurity legislation to pass either chamber of Congress, and is the Co-Chair of the Congressional Cyber Security Caucus. And as a member of the Senate Appropriations Committee, and future Chair of the Armed Services Committee, Senator Jack Reed has maintained his support for data protection in the U.S. financial sector. Senator Sheldon Whitehouse and Congressman David Cicilline are also active supporters. Continuing to engage our delegation so that both state and federal policies are geared towards maritime cybersecurity innovation will help create the conditions for job creation and advancement in a growing sector of the economy.

Rhode Island has all the components necessary to be a national leader in maritime cybersecurity efforts in both the private and public sector. Utilizing these components will help us cultivate a national reputation as a state committed to advancing and leading with respect to maritime cybersecurity. Connecting smart state and federal policies with innovative industry actions will not only help our state gain traction in the job markets, but will make us a destination for tomorrow's engineers and technology professionals.

### **Trade Internships at Electric Boat**

SENEDIA and the Defense Industry Partnership have shown themselves to be at the cutting edge in terms of maritime cybersecurity and new technologies. But the Partnership's work has also extended into developing more traditional skillsets among those who need them for advancement in the industry. With assistance from the Defense Industry Partnership and the Governor's Workforce Board, General Dynamics Electric Boat has successfully completed several rounds of internship programs with underserved populations like youth and veterans.

Through one program targeting the state's unemployed youth, Electric Boat brought interns to work in various trades in their production areas and ultimately offered full-time employment to 17 of them. With Defense Industry partnership assistance and working with YouthWorks411 to find candidates, Electric Boat helped these youth find jobs and develop lasting skillsets that are applicable to a number of critical industries.

Following the success of the youth internships, another program was designed to create opportunities for the state's unemployed veterans. Today, Electric Boat employs 17 veterans who interned in various production trades. Serving our veterans and improving workforce training among that populations has been one of the Defense Industry Partnership's and SENEDIA's goals from day one.

"These programs have been an important source of job candidates as we ramp up employment at our Quonset Point manufacturing facility to meet Navy demand for submarines," said Jason Vlaun, Human Resources Director for Electric Boat.

SENEDIA with its member companies including Electric Boat and Raytheon continues to be integral in developing a 21<sup>st</sup> century workforce that meets the demand of the defense sector in Rhode Island. Tailored internship and apprenticeship opportunities serve as a key component to workforce training strategies in any sector, and the support of the RI Governor's Workforce Board is a key enabler.