MAComb-OU INCubator

Incubate. Innovate. Accelerate.

BEST WISHES FOR A HAPPY NEW YEAR

HAPPY HOLIDAYS

The Mac-OU INC staff wishes you joyous holidays and a happy 2016. May your businesses prosper in the new year!

Oakland University in Macomb County - Staff

MAC-OU INC HAPPENINGS: CYBER SECURITY INITIATIVES

THE VELOCITY HUB: STRATEGIC PLAN FOR SUCCESS

As the State of Michigan strategically executes its Michigan Cyber Initiative, a new, unclassified hub of the Michigan Cyber Range, powered by Merit Network, has been developed at the Velocity Collaboration Center, home of the Macomb-Oakland

University INCubator (Mac-OU INC).

The Mac-OU INC team allocated many resources towards, and completed the due diligence of, learning the current environment of this new cyber initiative. Various team members attended hacker conferences, such as DEF CON 22 in Las Vegas and GrrCON 2014 in Grand Rapids, as well as Governor Snyder's 2014 and 2015 North American International Cyber Summits. Meetings commenced with local cyber security experts and industry professionals including General Stone of the Michigan National Guard, executives at Lockheed Martin and the Merit Network, Oakland University administration, and Cyber OU students.

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Powered by merit

MAC-OU INC RAISES NEARLY $300K TO LAUNCH A UNIQUE CYBER SECURITY INITIATIVE

Foundations and community partners have joined forces to contribute a total of $298,659, plus in-kind services, to the Macomb-Oakland University INCubator (Mac-OU INC) for the development of a comprehensive cyber-security program.

This funding will assist in the development of the Velocity Hub extension of the Michigan Cyber Range (MCR), powered by the Merit Network. Mac-OU INC is managing this publicly-accessible MCR extension hub, the first of its kind connected to an incubator program targeted towards startup and emerging companies in the State of Michigan. This effort is in collaboration with the Merit Network, the Michigan Defense Center of the Michigan Economic Development Corporation (MDC), Macomb County Department of Planning & Economic Development (MCPED), the City of Sterling Heights and Oakland University.

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HOW CAN YOU UTILIZE THE VELOCITY NODE OF THE MICHIGAN CYBER RANGE?

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Validation: We conduct security "best practice" checklist reviews and in-depth product validation penetration tests.

Preparation: We lease virtual space within our secure sandbox environment stocked with hardware and software.

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OAKLAND UNIVERSITY CRIMINAL JUSTICE MAJORS INTERN WITH MAC-OU INC

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L to R: Nikki Kartsonas, Matthew Zak, Larry Herriman

THE VELOCITY HUB: HOME TO MADCAT

The Michigan Automotive and Defense Cyber Assurance Team (MADCAT) has recently named the Velocity Hub of the Michigan

Cyber Range as its official home base. This regional cyber alliance seeks to leverage Macomb County's unique assets in defense and automotive advancing the creation of a cyber-security ecosystem in order to drive technology innovation, encourage economic development, and create a talented workforce.

Initiated in early 2014 through a grassroots effort, leaders from government, education, non-profit and the private sector have come together in a common goal to help Macomb County, the region, the state, and the country. This effort focuses on establishing Macomb County as a world leader in being a major cyber ecosystem by providing the infrastructure necessary to support growth, retention, and collaboration.

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For more information on the Velocity Hub of the Michigan Cyber Range, please visitmacouinc.org/cyber or contact:
Larry Herriman, Assistant Director, Macomb-OU INCubator
herriman@oakland.edu
(586) 884-9332

Macomb-OU INCubator at Velocity Collaboration Center
6633 18 Mile Road, Sterling Heights, MI 48314
Phone: (586) 884-9320 | macINC@oakland.edu

Friday, December 18, 2015 - December 2015 Newsletter: "The Velocity Hub: Strategic Plan for Success"
As the State of Michigan strategically executes its Michigan Cyber Initiative, a new, unclassified hub of the Michigan Cyber Range, powered by Merit Network, has been developed at the Velocity Collaboration Center, home of the Macomb-Oakland University INCubator (Mac-OU INC).

The Mac-OU INC team allocated many resources towards, and completed the due diligence of, learning the current environment of this new cyber initiative. Various team members attended hacker conferences, such as DEF CON 22 in Las Vegas and GrrCON 2014 in Grand Rapids, as well as Governor Snyder's 2014 and 2015 North American International Cyber Summits. Meetings commenced with local cyber security experts and industry professionals including General Stone of the Michigan National Guard, executives at Lockheed Martin and the Merit Network, Oakland University administration, and Cyber OU students.

During this time, the team conducted feasibility discussions and devised a strategic plan with eight initiatives for optimum success. The team has achieved over half of the proposed deliverables and is well on their way to completion.

Within the Velocity facility, initial visual representation of the proposed cyber-security laboratory environment was depicted via a simulation, or mock-up. Using fold-out tables, old boxes and salvaged monitors/keyboards proved extremely valuable, as they created a visual to the communications with potential sponsors or contributors regarding the concepts of a virtual cyber laboratory.

The actual connection of the Velocity Hub involved a lot more than just a "cord through the wall." The team had to bore conduit from the nearby telephone pole to the facility, with over 360 feet of fiber optic cable running underground. This cable was then pulled through the underground conduit into the Velocity Center's control room, in which there is direct access to the terminal. In a celebratory moment, fiber-optic connectivity to the new Velocity Node was established on September 23, 2015.

About the Michigan Cyber Range

Michigan built this flexible cybersecurity range and program to meet the 21st century needs of critical infrastructure defense, homeland security, criminal justice and education. Cybersecurity differs from other technical disciplines in that it involves a critically thinking, adaptive adversary. The best way to improve defensive capabilities in this area is to practice against those adversaries. To meet this need, we chose the Merit Network to begin operating a cybersecurity range and program. The project is a public-private collaboration that includes government, the National Guard, universities, community colleges, K-12 schools and private industry.

The Michigan Cyber Range is a program that leverages the physical range to develop world-class cybersecurity professionals. There is a full program of meetings and workshops as well as tools to develop and promulgate best practices in cybersecurity training and cybersecurity itself. The range is used for individual as well as collective training. The staff are experts in the best and most current practices of cybersecurity training and are focused on meeting the specific needs of the people and organizations that use the range.

The Michigan Cyber Range provides students and IT professionals with a solid foundation in cybersecurity through challenging hands-on coursework, exercises and labs. Courses are aligned with the National Institute of Standards and Technology's National Initiative for Cybersecurity Education (NICE). The NICE framework organizes the skills that America's cybersecurity workforce needs to meet the national preparedness goals of detecting, mitigating and defeating malicious actors. It engages all levels of the workforce, presenting essential concepts, techniques and practices based on individual functions within the organization.[1]

[1]Leading the Nation: An Interagency, Public-private Collaboration, 2015

Friday, December 18, 2015 - December 2015 Newsletter: "Mac-OU INC Raises Nearly $300K to Launch a Unique Cyber-Security Initiative"

Foundations and community partners have joined forces to contribute a total of $298,659, plus in-kind services, to the Macomb-Oakland University INCubator (Mac-OU INC) for the development of a comprehensive cyber-security program.

This funding will assist in the development of the Velocity Hub extension of the Michigan Cyber Range (MCR), powered by the Merit Network. Mac-OU INC is managing this publicly-accessible MCR extension hub, the first of its kind connected to an incubator program targeted towards startup and emerging companies in the State of Michigan. This effort is in collaboration with the Merit Network, the Michigan Defense Center of the Michigan Economic Development Corporation (MDC), Macomb County Department of Planning & Economic Development (MCPED), the City of Sterling Heights and Oakland University.

The largest contribution extends from the New Economy Initiative (NEI) in the form of a $204,000 grant. Main objectives of the NEI grant includes incorporating the cyber range into the incubator's suite of programming; strengthening entrepreneurial bridges within Southeast Michigan to support cyber security; supporting Southeast Michigan's economy by identifying emerging, technology-based companies which are well-positioned to expand through the cyber range; and offering training and support initiatives in Science, Technology, Engineering, and Mathematics (STEM).

Contributions from OU, MCPED, and the MDC are for the amounts of $47,500, $23,653, and $23,506, respectively. This funding will go towards items such as materials, equipment, installation, and access to the sandbox environment of the Merit Network. In addition, the City of Sterling Heights has provided numerous in-kind contributions, such as painting, signs, white boards, the location in the Velocity Center, and all the labor and installation associated with the contributions.

The NEI is a special project of the Community Foundation for Southeast Michigan. As the largest economic development initiative of its kind, NEI is dedicated to building a network of support for entrepreneurs and small businesses in the region. The NEI mission is to create an inclusive, innovative regional culture by reawakening and leveraging Detroit's creative entrepreneurial drive.

For more information, please contact Larry Herriman at the Macomb-OU INCubator at (586) 884-9332 or via email at **herriman@oakland.edu**.

Friday, December 18, 2015 - December 2015 Newsletter: "How Can You Utilize the Velocity Hub of the Michigan Cyber Range?"
Education: We hold certification courses for more than 20 different cyber security disciplines.

Mac-OU INC will host certificate education through the Merit Network. Each certification can be obtained through an approximate four to five day course including an exam. These programs will run through Oakland University's Professional & Continuing Education and will earn participants continuing education units. As stated on the Merit website, "Each course prepares you for real-life situations and for the related certification test. When you successfully complete a course, you will be able to confidently take a certification exam on the final day of the course."

Cyber-security employers demand a highly educated, highly experienced workforce. Some 84 percent of cyber security postings specify at least a bachelor's degree, and 83 percent require at least three years of experience.[1] Because of the high education and experience requirements for these roles, skills gaps cannot easily be resolved through short-term solutions. Employers and training providers must work together to cultivate a talent pipeline for these critical roles.

Cyber-security positions are more likely to require certifications than other IT jobs. 35 percent of cyber security jobs call for an industry certification, compared to 23 percent of IT jobs overall. With the Velocity Hub of the Michigan Cyber Range, we plan to assist and prepare students to address some of the aforementioned needs by offering degree-complementing certifications and real-world cyber security experiences.[2]

Validation: We conduct security "best practice" checklist reviews and in-depth product validation penetration tests.

In this Velocity Hub of the Michigan Cyber Range, small and large businesses alike will have the opportunity to conduct virtual assessments and exercises on early-stage connected products. Similar to a shooting range for gun use and training, this secure sandbox environment is stocked with tools and targets to complete safety, performance and efficiency tests. Testing the degree of security on these connected products is of an ever-increasing importance.

Preparation: We lease virtual space within our secure sandbox environment stocked with hardware and software.

Via Governor Snyder's Michigan Cyber Initiative, our goal is to educate the public and raise awareness on the ever-increasing importance of cyber security. Along with this, companies large and small need access to this isolated sandbox environment, which mimic a real-world setting, in order to test products or hold demonstrations. Over the years, technology has become deeply engrained in everyday life, resulting in a world that is more interconnected than ever. This has dramatically increased the number of cyber-attacks and system intrusions, which resulted in sensitive personal and business information being released, financial loses, and disruptions of business operations. These attacks and intrusions have created a twofold problem, organizations need a way to test the security on products and services before launching them, and a workforce is needed to help protect against cyber-attacks and intrusions. A cyber range is a facility with a unique internet connection that can be used for this testing and training.

[1]Cyber Security Quick Facts, University of Maryland University College

[2]via Burning-Glass.com

Monday, December 14, 2015 - December 2015 Newsletter: "Oakland University Criminal Justice Majors Intern with Mac-OU INC"

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Matthew is a criminal justice major specializing in information security and assurance. Upon graduation in May of 2016, he will be seeking work in the private sector, performing penetration tests for companies. Nikki is a criminal justice major with a specialization in homeland security. She has a strong interest in intelligence analysis and is looking forward to next semester, during which time she will take a course entitled cybercrime, complete an in-depth analysis of a criminal justice policy, and start another internship, this time with the Michigan Economic Development Corporation's Michigan Defense Center.

"The greatest takeaway from this internship is general career guidance and advice from Larry [Herriman, Assistant Director, Mac-OU INC]. He really made my experience valuable as I have gained many skills that I can use in my next internship and future jobs. I also learned more about cybersecurity than I had previously known and that knowledge gained really set in stone the field of intelligence analysis I want to pursue," Nikki said.

Nikki and Matthew researched cyber security certificate offerings to recommend future courses and schedules, and they also had the opportunity to attend the North American International Cyber Summit at Cobo Hall in Detroit. Nikki focused her additional efforts on researching the current market, assisted with presentations, and wrote a significant portion of a National Science Foundation grant application. Matthew's additional responsibilities included assisting in the construction of the Velocity node, designing and testing a virtual environment for computer glitches, and installing computer operating systems and updates.

For more information on the Mac-OU INC internship program, including opportunities within marketing, IT, and cyber security, contact Joan Carleton at **macINC@oakland.edu** or (586) 884-9324.

Friday, December 18, 2015 - December 2015 Newsletter: "The Velocity Hub: Home to MADCAT"
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Initiated in early 2014 through a grassroots effort, leaders from government, education, non-profit and the private sector have come together in a common goal to help Macomb County, the region, the state, and the country. This effort focuses on establishing Macomb County as a world leader in being a major cyber ecosystem by providing the infrastructure necessary to support growth, retention, and collaboration. The ongoing organizational meetings are designed to bring together various stakeholders from government, industry and academia in Macomb County to discuss various cyber range and cyber hub activities and to whiteboard goals and objectives to help move these initiatives forward.

Members of the collaborative include:
Government
- Macomb County
- The Michigan Defense Center of the Michigan Economic Development Corporation
- 127th Wing of Michigan Air National Guard on Selfridge Air National Guard Base
- City of Sterling Heights
- Macomb/St. Clair Workforce Development Board

Defense/Automotive
- General Dynamics Land Systems
- TACOM Life Cycle Management Command
- U.S. Army Tank Automotive Research Development & Engineering Center (TARDEC)
- BAE Systems
- Rave Computers
- Wyle

Education
- Macomb Intermediate School District
- Macomb Community College
- Wayne State University
- Oakland University

Non-Profit
- Merit Network
- Workforce Intelligence Network

For more information on MADCAT, and the application to become involved, visit **madcat.macombcountymi.gov**.