

## Leveraging Collaborative Connections to Bring Cybersecurity to Our Students

OCRI ANNUAL CONFERENCE  
WEDNESDAY, OCTOBER 16, 2024  
DR. HELEN SCHNEIDER & LYNN CHILD

### Topics for Discussion

- Introduction & Background (K-12 Outreach and Collaborative Connections)
- Timeline Overview: 1999 to Present
- Foundation: Collaborative Connections Over the Years:
  - TIC: Economic Development & Quality of Life of Citizens
  - IA Forum/Business Survey: Students, Businesses, Government, Non-Profits, and Community
  - Other Collaborations Over the Years, including the OC3
- Cyber Exploring Post
  - Development and Implementation
  - Challenges & Evolution of Cyber Post
  - Opportunities and Future Plans
  - Curriculum
- Workforce Development
- OCRI Regional Programming Center (RPC) - Tiffin University (TU-Lead), Millstream Career Center/Findlay City Schools (FCS), The University of Findlay (UF), and CentraComm (CC)
  - RPC Activities
  - Grant Activities
  - Outcomes & Lessons Learned
- Brainstorming and Q & A



### Timeline Overview

- 1999 – Present: Telecommunications Infrastructure Committee (TIC)
- 2002 – Present: UF Information Assurance Forum
- 2004: Created and Administered 1<sup>st</sup> Technology Business Survey
- 2004 - 2021: TIC Business Technology Survey Results presented at the IA Forum
- 2015 – Joined the Newly-Forming Ohio Collaboration Committee (OC3)
- 2018 – Capture the Flag at Findlay City Schools (FCS) - Brainstorming Vision for Cybersecurity Available to Every Ohio Student
- 2019 - Formed Cyber Exploring Post 323 (CentraComm lead with Marathon, Millstream/FCS, UF & Boy Scouts)
- 2019 - IA Forum 2019 Featured OC3 sessions –Charter & Governance Public Awareness, Education/Workforce Development, Cyber Range, Cyber Protection & Preparedness
- 2021 - Present – OCRI RPC designation
- 2024 – Evolution of Cyber Post to In-Class Guest Speakers

### Foundation: Collaborative Connections Over the Years

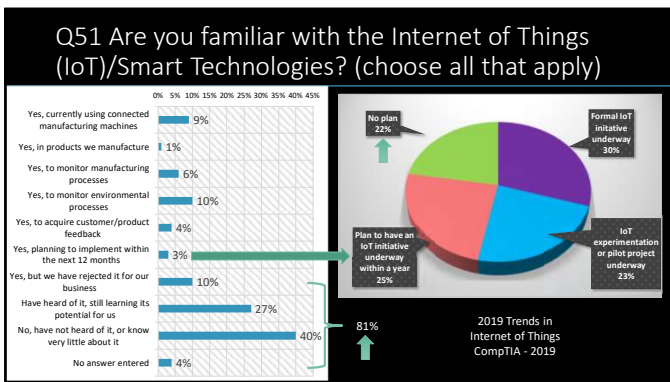
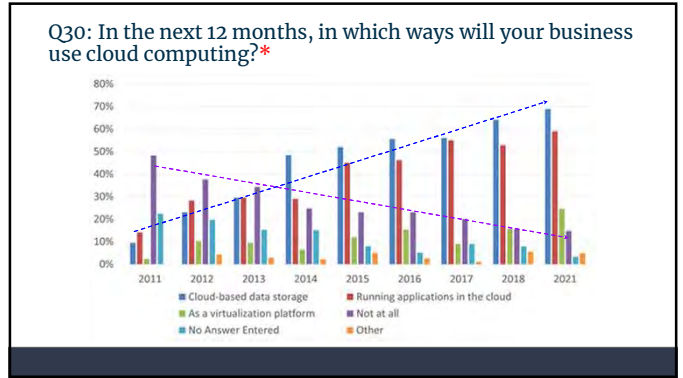
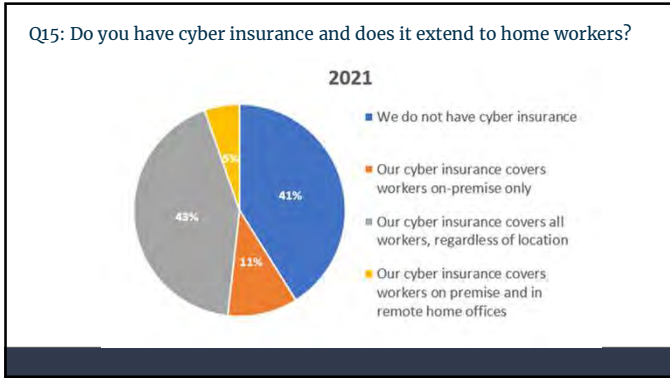
- **TIC:** Economic Development & Quality of Life of Citizens
- **Annual IA Forum/Business Survey:** Students, Businesses, Government, Non-Profits, and Community
- **Other Collaborations:** Events, Advisory Boards, Referrals and Introductions, including the OC3
- **RPC:**
  - Tiffin University (Lead)
  - Millstream Career Center, Findlay City Schools
  - The University of Findlay
  - CentraComm

### Technology Infrastructure Committee - TIC

- Telecommunication Infrastructure Committee - Established in 1999 as a Subcommittee of Findlay/Hancock County Economic Development & Chamber
- Dual Goals:
  - Stimulate economic development
  - Support the desirability to live, work, and play in Findlay and Hancock County
  - Pre-Covid Meetings are held regularly on the last Friday of each month from 2-4 pm at the Chamber. Post Covid via Zoom.
- Technology Infrastructure Committee - 2004
  - Should the Work of the TIC Continue? Decided “Yes”
  - Name Changed to Reflect that the Committee’s Work Had Been Successful
  - Dual Goals Reviewed and Confirmed
  - Continued IA Forum and Added the TIC Technology Business Survey

### TIC Business Technology Survey

- Goal: Determine Community-wide Use & Needs of Telecommunications and Technology
  - TIC member teaching part-time IA at UF noted disconnect between national security surveys and local businesses
  - Q categories: demographics, business impact, infrastructure, IA/security, theme topics
  - Results allowed benchmarking local trends
  - Identify educational workshop opportunities
  - Students looked at current and prior responses
  - Students made connections to national surveys
  - Results reported at the Annual Information Assurance Forum (IA Forum)



**Information Assurance Forum**

- o Annual outreach held at The University of Findlay for campus and regional business community
- o Results of annual Business Survey are presented by UF students
- o Speakers from business, industry, academia, non-profits, governmental, and students
- o Topics and speakers are brainstormed by UF and the TIC, with The Chamber facilitating marketing and registration
- o Sessions are recorded and posted by UFTV; Zoom attendance has become a standard option
- o Business sponsors help support the cost of the event and support the employment and internships session at the end of the day

- Information Assurance Forum Topics**
- Government Trends in IA
  - Academic Trends in IA
  - Changing Cyber Landscape
  - Copyright & Intellectual Property
  - Smart Beginnings for Small Business
  - Social Networking
  - Mobile Devices
  - BYOD
  - Cybersecurity Threats
  - Big Data
  - Insider Threats
  - Internet of Things
  - Smart Living
  - Privacy vs Convenience
  - Ohio's Cyber Collaboration Committee
  - Ransomware
  - Remote & Hybrid Workforce
  - Incident Response
  - AI & 4<sup>th</sup> Industrial Revolution
  - Disruptive Technology
- WWW.IAForum.net

23<sup>rd</sup> Annual Information Assurance Forum

**DISRUPTIVE TECHNOLOGIES**

INNOVATE, SECURE, & QUESTION EVERYTHING!

**OCTOBER 30, 2024**  
10:00 AM - 2:30 PM

**UF Winebrenner Auditorium**  
950 N. Main St., Findlay, OH 45840

Register now for this complimentary event, brought to you by our amazing sponsors! Lunch included with RSVP by October 23rd!

REGISTER HERE!

iaforum.net  
Available on Zoom/UFTV

University of Findlay | Steve Wilton, Hancock County Treasurer | CENTRACOMM

THE ALLIANCE | SGT&K | GSW | JFW Cyber Consulting

### Other Collaborative Events Over the Years

- o **Social Media Contest:** (2009) for high school students: (The Courier, IA Forum)
- o **Capture the Flag Event:** (February 2018) at Findlay City Schools
- o **Training with The Chamber:** CEO/CIO Retreat (2004), Social Media (2009), QR Codes (2011 & 2012)
- o **Shared Guest Speaker:** (2013 IA Forum speaker) held additional sessions for K-12 Education & Government, and Business next day
- o **CyberPatriot Camp:** (April 2019) – FCS looked at CyberPatriot summer camp (UF connection to U Detroit-Mercy)
- o **CentraComm:** (Ongoing) Cyber Awareness Training for Chamber Members & Community
- o **Advisory Boards:** (Ongoing) Participation at UF, Millstream, Owens CC, Others
- o **Technology & Cyber Webinars & Training:** (Ongoing) since 1999 due to the Work of the TIC

### Ohio Collaboration Committee (OC3)



- **Goal:** Determine Best Means to Improving Cybersecurity and Authorized by Governor John Kasich (2015)
- **Mission:** To provide an environment for collaboration between key stakeholders, including education, business, and local government to strengthen cyber security for all in the State of Ohio and to develop a stronger cyber security infrastructure
- **4 Committees Created:** Charter & Governance Public Awareness, Education/Workforce Development, Cyber Range, and Cyber Protection and Preparedness,
- **Composition:** Ohioans with a wide range of cyber and educational expertise dedicated to making an Ohio a leader in how to integrate public-private partnerships into solving the cyber security problem.

### Cyber Exploring Post: OC3 Call to Action

- o Development and Implementation
  - o 2019 - Formed Cyber Exploring Post 323 (CentraComm lead with Boy Scouts, Marathon, Millstream/FCS, UF)
    - o Hosted meetings at CentraComm, Millstream, UF
    - o Used cyber range for the CTF as culminating activity
    - o Topics included: Career paths, ethics, networks, Linux commands and tools,
  - o 2019-2020 – Sep – April; CTF (Ohio Cyber Range) on March 10<sup>th</sup>; final meeting online
  - o 2020-2021 – Zoom meetings (networking basics, etc)
  - o 2021-2022 - Open House – Nov 21; Capture the Flag on 4/11 using picocft.org
  - o 2022-2023 –Post Inactive; Kickoff planned Sep, Nov; transitions & recruiting – Continued individual mentoring at Millstream/FCS
  - o 2023-2024 - Post Inactive: no meetings due to low response rate – Continue individual mentoring at Millstream/FCS
- o Challenges & Evolution of Cyber Post - 2024 – Morphed into 1-2 Guest Speakers at Millstream/FCS
- o Opportunities and Future Plans – 2025 – Re-invigorate After-School Cyber Post

### Cyber Exploring Post: Curriculum



- o **Open House**
  - o Intro to team, schedule, expectations
  - o Career paths
  - o Ethics & Professionalism
  - o Resources: Ohio Cyber Range, NIST CSF, etc
  - o Interactive Component: Cryptography
- o **Dec - Risk Management Overview & Basic Networking**
  - o Interactive component
    - o Cisco Packet Tracer
- o **Jan - Operating Systems – Windows and Basic Linux**
  - o Interactive component:
- o **Feb - General administrative security**
  - o Interactive component
    - o Devices – Physical
    - o Backups, firewalls, as a whole
    - o Cloud
- o **Mar - Thinking Like an Attacker 101 (not too advanced)**
  - o Interactive component: Help students think about 'what can I make this do?'
- o **Apr - Cyber Range Demo**
  - o Interactive component: Capture the Flag Activity

### Workforce Development

- o Internships
- o Job Shadowing
- o Mentoring
- o Hiring
  - o TIC Member Organizations
  - o Job Matching as a Component of the Annual IA Forum
  - o Use of OCRI Job Board
- o Job Attraction
- o Job Retention



### OCRI RPC

#### Northwest Ohio Cyber Collaborative

- o Tiffin University (Lead)
- o CentraComm
- o Millstream Career Center
- o University of Findlay
- o Natural Evolution based on our Collaborative Connections

"...first of its kind, integrating K12, higher education, and industry partners in one RPC."



## RPC: Examples of Activities

- RPC designated Fall 2021
- Activities
  - Educational materials – TU Cyber Bootcamp Modules for Summer 2023
  - Training Presentations
    - Apr 2023 Understanding and Avoiding Phishing and Other Cyber Scams (CC - Webinar for Cleveland Public Library Employees)
    - Apr 2023 Evaluating and Managing Your Cyber Risk, A Formula Based Approach (CC - ISSA Conference, Columbus, OH)
    - Mar 2022 Cybersecurity for Educators – (Cybersecurity Awareness for UF EDUC 310)
  - Events
    - Cyber Bootcamp – TU - Summer 2023, Summer 2024
    - UF/TIC IA Forum – Fall 2021, 2022, 2023
    - Cyber Exploring Post 323 – 2019-20, 2020-21, 2021-22
    - UF ACM –Capture the Flag

## RPC Grant Activities

- Hired student IT workers at Findlay City Schools
- Developed curriculum at TU,UF, Millstream/FCS
- Hired graduate assistants at UF
- Hired instructor at TU
- Hired intern at CentraComm
- Provided scholarships for bootcamp fees at TU

## Outcomes



- Students:
  - Reach K-12 audience to bring awareness of cybersecurity paths
  - Engage students in discussions of ethics and professionalism
  - Give students hands-on opportunity to learn networking concepts
  - Have students learn and practice Linux commands
  - Have students experience capture the flag activity
  - Provide resources students can use to continue learning during summers on their own
  - Provide career exploration through job shadowing and Internships, connections for jobs
- Community & Professionals:
  - Provide ongoing professional development through invitations to the IA Forum and other business networking learning events
  - Support talent growth and retention
  - Be forward-thinking in helping to create knowledge and application of emerging technologies

## Lessons Learned

- Leverage connections within your communities (Collaborative Initiatives: TIC, CC, FCS, UF, Marathon work on many projects together)
- Use resources that have connections to the youth population (e.g., Boy Scouts)
- Be creative in working through challenges (i.e., pandemic)
- Let the students help guide relevance to their needs and interests
- Be flexible and revise when one learning approach is not working and substitute another (cyber post to in-class guest speakers)
- Use of State of Ohio cyber resources are instrumental in leveraging cyber learning for students – OCRI, OC3, Cyber Reserve, etc.
- Access to grant funding to support student learning

Connections creating Collaboration is Our RPC's Secret Sauce In Helping Our Students!

## Wrap-up



- Brainstorming Resources for Building Collaborative Connections with Different Communities
- Q & A

oWant to Explore Further? Contact:

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