Iowa Cyber Alliance

Protecting the nation through cyber education

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Cyber crime is a growing problem

- Estimated over 500 million victims per year
- Cyber crimes costs over 300 billion per year
- After 20 years it is still a problem
  - Attacks against users are increasing
  - More users on line
  - Current IT staff falling behind
  - Shortage of cyber security workers
We need a multipronged approach to fixing the problem

• Better user education
  – K-12
  – All citizens

• Robust on job education for current IT-staff
  – On-line courses and degrees

• Increase the cyber workforce
  – Expand the pipeline
  – Expand the pathways
  – Expand the student – company interaction.
Iowa Cyber Alliance

The Iowa Cyber Alliance will be the nation’s first state wide comprehensive program dedicated to providing security education, outreach, and training to government agencies, businesses, and all its citizens.

Leverages off the Iowa Cyber Security Strategy.
Iowa Cyber Alliance

The Iowa Cyber Alliance has grown out of a long standing partnership between numerous groups that have been providing and delivering the programming necessary to accomplish the goal of creating a safe and secure Iowa.

- Federal, state, and local government
- Educators
- Business and industry
- Trade groups and associations
Iowa Cyber Alliance Goals:

- Delivering security literacy to all Iowans
- Providing educational pathways to grow the cyber workforce
- Coordinating and delivering cyber security training
- Assisting in technology based information security capabilities to benefit the members
- Working with potential employers to develop employment opportunities
Iowa Cyber Alliance
4-E model

Enlighten
Engage
Educate
Employ
Pillar overview

• Enlighten:
  – Introduce security literacy to all citizens to make them safer and increase interest in cyber security.

• Engage:
  – Using informal activities like exercises and training to build the pipeline and enhance security capabilities.
Pillar overview

• Educate:
  – Create educational pathways for all levels of cyber learners to increase the number of cyber workers

• Employ:
  – Create opportunities for employers to influence the educational outcomes to meet their needs and to increase interaction between employers and potential employees through internships and mentoring.
Enlighten pillar goals

- develop comprehensive security literacy program for all citizens
- deploy security literacy throughout Iowa schools
- partner with other state and national groups to develop best practices
- work with government and industry to identify or develop best practices for work place literacy
Current state activities

- 6-12 grade security literacy curriculum
- College level security literacy curriculum
- 3-5 grade security and digital literacy board game (under development)
- Interactive web based security literacy lab (under development)
- Iowa CIO / CISO state government security awareness campaign.
Engage Pillar Goals

- expand the engagement opportunities for grades 6-12
- develop a state-wide mentorship program to enhance linkages between industry and students
- develop training for state and local government staff
- create state-wide cyber exercises for state and local government agencies
- create cyber education materials for small businesses and their employees
- develop cyber education materials for specific groups (like AG, BIO, etc)
Current state activities

- College level Cyber Defense Competitions (CDC) – 4 a year at ISU
- Hyperstream / IT-Olympics – High school cyber curriculum, high school CDC, state wide ISERink
- State-wide cyber security playground (ISERink)
- State-wide cyber range (ISERange), under development
- National Guard cyber exercises
Educate Pillar

• develop articulation agreements
• enhance the educational opportunities for the current workforce
• develop a set of uniform course outcomes
• develop scholarship and internship opportunities for students
• expand the cyber defense competitions
• expand cyber security education into 9-12 grades and into post high school
Current State Activities

- Cyber security degrees at ISU (Minor, MS)
- Cyber security courses at other post-secondary schools
- ISU online masters degree in cyber security.
- Community college cyber defense competition
- ISU national cyber defense competition
- Various 2+2 programs between community colleges and 4 years schools. None focused on cyber security.
Cyber Security Education: Iowa Pathways

3-12 Literacy → 9-12 Engagement (Hyperstream) → 3-12 Literacy → 9-12 Engagement (Hyperstream) → CC Tech Degree → CC AS Degree → ISU: CprE and/or Cyber Security Minor → ISU MS in IA → Safer on-line → Security Admin → Security Engineer /designer/researcher
Employ Pillar Goals

• develop standardize job postings and job descriptions based on the NICE framework
• develop cyber security employment opportunities
• align educational outcomes with employment opportunities
• facilitate industrial interaction to meet workforce needs.
Iowa Cyber Alliance: Structure

• The Iowa Cyber Alliance will be organized into three layers as described below:
  – The Alliance members consisting of anyone belonging to the alliance
  – The Alliance pillar working groups consisting of representatives from the alliance membership
  – The Alliance Leadership committee which will have a member from each working group, plus the executive team.
Iowa Cyber Alliance: Goals for the afternoon session

• You have been assigned to one of the 4 pillar working groups breakout sessions.
• The breakout sessions are designed to help develop a plan for moving forward.
• The goals of the breakout session are:
  – Review pillar goals and current activities
  – Identify any changes or additions
  – Identity any gaps or areas that the working group should focus on
  – Report back to the group
Iowa Cyber Alliance: Moving Forward

• Working groups will:
  – Identify initial membership and chairs
  – Develop an operational plan to carry out top priority goals

• The first alliance member meeting in fall 2017
Questions

The Iowa Cyber Alliance:
Together we can make Iowa and the nation a safer and more secure place.