



Summary Report from the
Girls Workshop
Cool Careers for Girls in Cybersecurity
October 6th, 2006
University of Maryland, College Park, MD



University of Maryland CyberWATCH Subcontract Deliverables by Year Update

YEAR 2

Cool Careers for Girls in Cybersecurity Workshop-Maryland Event Summary

University of Maryland hosted the second in a series of *Cool Careers in Cybersecurity Workshops* which provided information and skills necessary to navigate the professional pipeline in the vast fields of Cybersecurity and Information Assurance as well as other science, technology, engineering, and mathematics (STEM) fields. The second workshop was held Friday October 6, 2006. The workshop was run in conjunction with the 5th annual Cyberethics, Cybersafety and Cybersecurity (C3) conference. 30 middle school girls and 20 high school students (N: F=11; M=9) participated in a full day session which included hands-on activities, speakers, and an opportunity to talk with professionals in the field. Students had the opportunity to learn more about Cyberethics, security and safety, as well as, learning first hand from IT/IA experts about career opportunities and pathways in Cybersecurity. Attention was given to issues for women from underrepresented groups.

Cool Careers in Cybersecurity Workshops sponsored by Educational Technology Outreach within the College of Education draws on research that indicates recruiting and retaining girls to the science and technology fields should include targeted programs to educate women and minorities about STEM career choices. The U.S. National Academies of Science and Engineering and the Institute of Medicine recently released a report entitled *Rising above the Gathering Storm* emphasizing the challenges of a growing global competitiveness. *Current research indicates that increasing women's participation in IT and related technologies is the fastest and potentially most effective method for addressing the looming workforce shortages as women increase their participation in the labor market and their enrollment and graduation in colleges and universities around the US and in Maryland.* The Cool Careers in Cybersecurity Workshops are one means to expose women to career possibilities.

The participants heard from the opening speaker [Maryland's First Lady Kendel S. Ehrlich](#) whose initiatives include working with the iKeepsafe coalition to keep kids safe online and helping promote initiatives highlighting career opportunities in Cybersecurity and other IT fields.. Detective Sergeant Robert Smolek from the [Maryland Internet Crimes Against Children Taskforce](#) then discussed computer facilitated crimes against children, with a particular focus on victims, offenders, and those online technologies commonly used to sexually exploit children. Detective Smolek discussed and showed how tools such as digital forensics can help catch criminals. [Naomi Lefkovitz](#) from the [Division of Privacy and Identity Protection](#) of the Federal Trade Commission presented [Deter, Detect, Defend: The FTC's Program on Identity Theft \[PPT\]](#). [Information Security in Today's World \[PPT\]](#) [Casey O'Brien](#) an Associate Professor and Network Technology Program Coordinator from the Community College of Baltimore County (CCBC) and consortium member, provided students with an overview of: what information security is; the challenges to information security; the latest trends; best practices to help protect your digital assets; the need for Information Security professionals; and CyberWATCH. A luncheon allowed students the time to network with IT/IA professionals. The Keynote Luncheon Introduction was presented by [Liesyl Franz](#), Department of Homeland Security introducing Keynote presenter [Ron Teixeira](#) Executive Director and Alyssa Marlow, Manager of Programs and Communications of the [National Cyber Security Alliance](#) who discussed the importance of cybersecurity, and how the education of our youth and public about IT/IA career opportunities is imperative to the future of industry. Students then participated in an interactive, hands-on session with Craig Holcomb from the [National Security Agency](#). Mr. Holcomb first presented on the Ethical Use of Computers and then using cryptology-the study of code, and cryptanalysis (breaking secret codes), students encrypted and decode messages enabling them apply cryptographic methods and understand how these methods can be used to enhance security.

Detailed Agenda

| | |
|----------------|--|
| Stamp Union | <p>Welcome and Logistics Pre-Profile</p> <p>Davina Pruitt-Mentle - Director, ETO-COE Dr. Dennis M. Kivlighan, Jr. - Interim Dean, College of Education Dr. C.D. Mote, Jr. - President - University of Maryland</p> |
| Stamp Union | <p>Introductions: Marsali Hancock, President Internet Keep Safe Coalition Jacalyn S. Leavitt, Chair of Internet Keep Safe Coalition - <i>iKeepSafe Coalition</i> Initiative Keynote: Maryland's First Lady Kendel S. Ehrlich</p> |
| Stamp Union | <p>Computer Crimes Against Children</p> <p>Detective Sergeant Robert Smolek Maryland Internet Crimes Against Children Taskforce</p> <p>As technology goes on and on, Internet crimes against children continue to be a growing problem, as the Internet has provided those individuals with a sexual interest in children unprecedented, unsupervised access to children. Detective Sergeant Robert Smolek, Director of the Maryland Internet Crimes Against Children Task Force, will discuss computer facilitated crimes against children, with a particular focus on victims, offenders, and those online technologies commonly used to sexually exploit children.</p> |
| | <p>Naomi Lefkowitz Division of Privacy and Identity Protection Federal Trade Commission</p> |
| | <p>Information Security in Today's World [PPT]</p> <p>Casey O'Brien Associate Professor and Network Technology Program Coordinator Community College of Baltimore County (CCBC)</p> <p>This session will provide an overview of: what information security is; the challenges to information security; the latest trends; best practices to help protect your digital assets; the need for Information Security professionals; and CyberWATCH</p> |
| | <p>Introduction: Liesyl Franz - Department of Homeland Security Keynote: Ron Teixeira Executive Director Alyssa Marlow Manager of Programs and Communications National Cyber Security Alliance</p> |
| | <p>Ethical Use of Computers & Cryptography & Cryptanalysis Hands-on Craig Holcomb National Security Agency</p> |
| | <p>Closure—Bus Back Home</p> |

Speaker Biographical Sketches

Biography of First Lady, Kendel S. Ehrlich State of Maryland

Kendel S. Ehrlich was born the youngest of three children and raised in the Baltimore County community of Lutherville, Maryland. As a member of the National Honor Society and co-captain of the Dulaney High School lacrosse team, Kendel honed the skills that follow her today - spirit, leadership, and commitment. She attended the University of Delaware and pursued a Bachelor of Science degree in Criminal Justice and a minor in Political Science. Before attending the University of Baltimore Law School, Kendel worked as a paralegal at the law firm of Venable, Baetjer & Howard.

Mrs. Ehrlich remains an active speaker focusing on the following initiatives: Education, Drug and Alcohol Abuse Treatment and Prevention, Hospice Care, Cancer Prevention, the creation of Maryland's first Women's History Museum, and Youth Internet Safety. She sits on several boards and is an avid fundraiser for various causes in Maryland, including: Cystic Fibrosis, GBMC Hospital, Race for the Cure, The Red Cross, Suited for Change, iKeepSafe and various statewide hospice organizations.

Detective Sergeant Robert Smolek Maryland Internet Crimes Against Children Taskforce

Detective Sergeant Robert Smolek is a 17-year veteran of the Maryland State Police, currently assigned to the Criminal Investigation Division where he supervises the Computer Crimes Unit, a specialized investigative unit dedicated to investigation of computer intrusion, fraud, identity theft, child exploitation, and digital media analysis. D/Sergeant Smolek also directs the Maryland Internet Crimes Against Children Task Force (MDICAC), a federally funded, multi-agency, multi-jurisdictional virtual task force designed to increase the capacity of Maryland law enforcement to respond to computer facilitated crimes against children.

As a Maryland Police Training Commission certified police instructor, D/Sergeant Smolek regularly lectures, trains, and provides technical assistance in the area of computer crime investigation to federal, state, and local law enforcement agencies and serves an adjunct professor at Anne Arundel Community College where he teaches a Cybercrime course. D/Sergeant Smolek holds an MS in Management from Johns Hopkins University.

Naomi B. Lefkowitz Attorney Division of Privacy and Identity Protection Federal Trade Commission

Naomi Lefkowitz is an attorney with the Division of Privacy and Identity Protection at the Federal Trade Commission. Her responsibilities focus primarily on identity theft policy issues, data security legislative activity, and business and consumer education in these areas.

Ms. Lefkowitz joined the FTC in 2001. For the five years prior to working at the FTC, she was Assistant General Counsel at CDnow, Inc., an online music retailer. At CDnow, Inc., she was responsible for negotiating and drafting contracts, managing intellectual property matters, lobbying and trade association participation as well as other corporate matters.

Immediately after receiving her law degree, Ms. Lefkovitz worked as the Legal Coordinator for the Police-Barrio Relations Project in Philadelphia, PA. Ms. Lefkovitz holds a B.A. with honors in French Literature from Bryn Mawr College and a J.D. with honors from Temple University School of Law.

Casey O'Brien
Associate Professor and Network Technology Program Coordinator
Community College of Baltimore County (CCBC)

Mr. O'Brien has more than 10 years experience in information security and large-scale IT project management in challenging and cutting-edge computing environments that include both the public and private sectors. Currently Mr. O'Brien is the Network Technology Program Coordinator and an Associate Professor at the Community College of Baltimore County (CCBC), one of the largest community colleges in the state of Maryland. Mr. O'Brien developed a four-course information security certificate program (one of the first in the state) and teaches both networking and information security-related courses. Mr. O'Brien's research interests include teaching information security at the two-year level, adaptive networks, and high-availability computing.

Liesyl Franz
Director, International Affairs
Deputy Director for Outreach and Awareness

Ms. Franz is the Director of International Affairs and the Deputy Director of Outreach and Awareness for the National Cyber Security Division. She directs NCSA programs in the areas of International and Policy, Communications and Messaging, and Stakeholder Outreach.

Prior to work with DHS, Ms. Franz served as Director for Global Government Affairs for EDS Corporation, a FORTUNE 100 information technology services provider. She represented EDS Corporation's position on public policy issues surrounding cyber security and privacy, trade and international business, and financial services regulatory issues. Prior to joining EDS, Ms. Franz served as Director for Services Trade Negotiations for the Coalition of Service Industries (CSI). CSI is an advocacy association for liberalized trade in services for the U.S. services industry, including financial, professional, telecommunications, energy, and other primary services.

Ms. Franz holds a BA in Political Science from the University of Texas at Austin and an MA from the Elliott School of International Affairs at George Washington University.

Ron Teixeira
Executive Director
National Cyber Security Alliance

As the executive director of the National Cyber Security Alliance (NCSA), Teixeira is responsible for the overall management of cyber security awareness programs and national education efforts. Teixeira works closely with various government agencies, corporations and non-profits to increase awareness of Internet security issues and to empower home users, small businesses and the education community with tools and best practices designed to ensure a safe and meaningful Internet experience. Teixeira has provided security tips on a number of news outlets like CNN, Newsweek, Associated Press, Parade Magazine and Radio and TV News Shows all over the country.

Craig Holcomb
National Security Agency

Are the ethical issues surrounding computers really new? Are they unique? Or are the issues the same old ethical issues confronting society for centuries? The information presented will help students understand the ethical issues as related to computers. Terms will be introduced and cases will be presented to help the students understand the material. Topics that will be presented include: 1) Computers and Privacy; 2) Crime, Abuse, and Hacker ethics; 3)

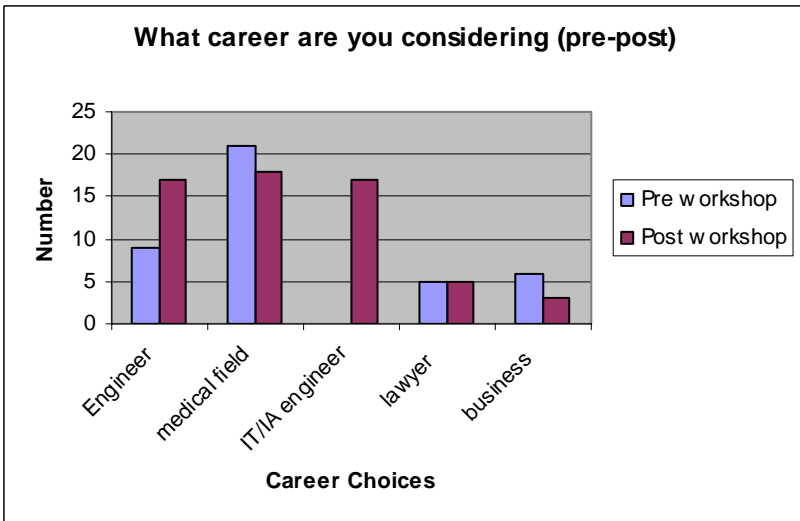
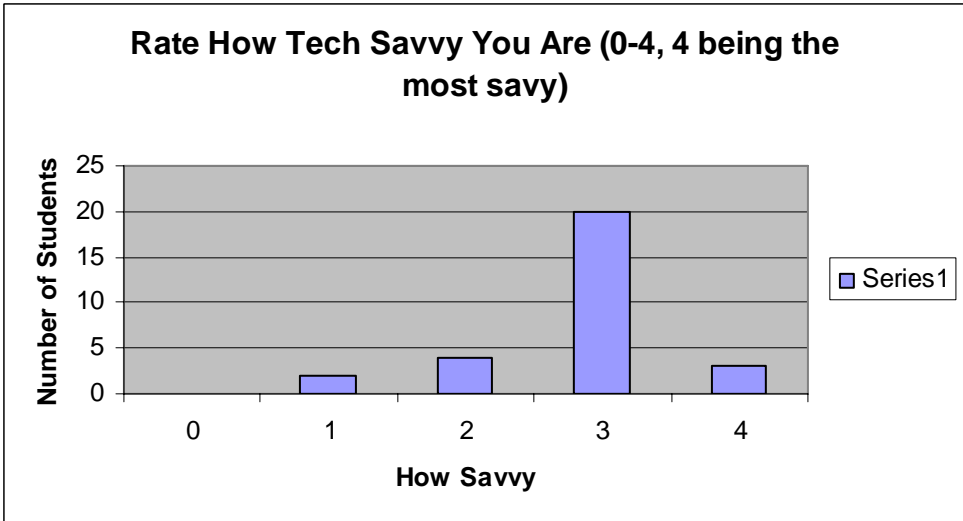
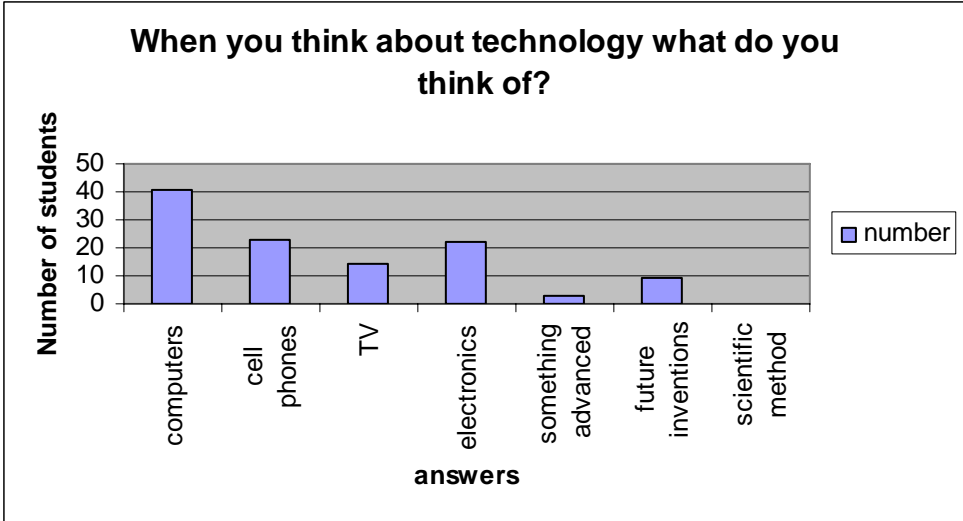
Responsibility; and 4) Social Implications and Consequences. The students will leave with simple guidelines on how to make an ethical decision and the Ten Commandments of Computer Ethics.

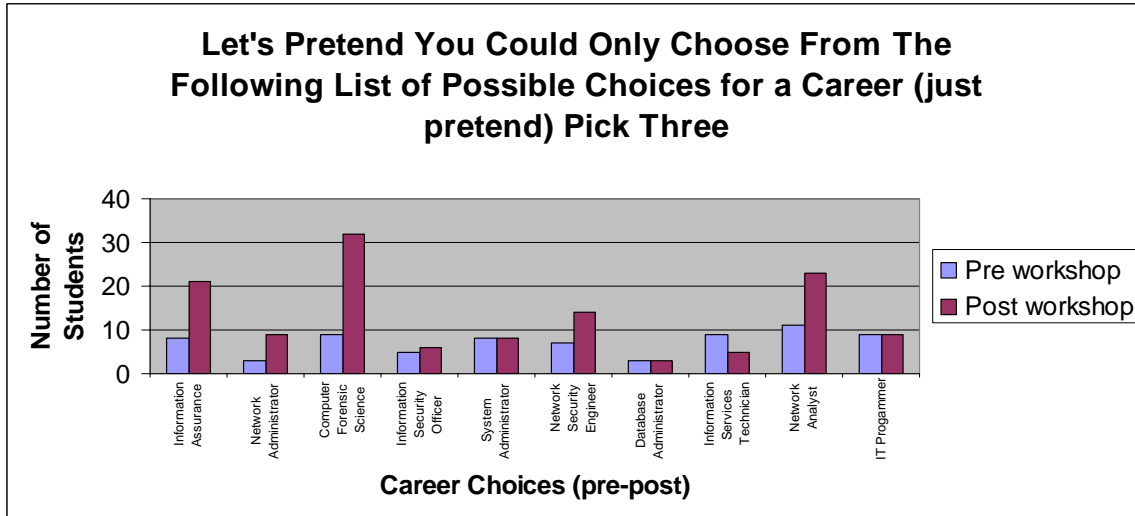
Lessons Learned:

Overall the workshop went very well. The only suggested improvement would be to find a way to extend the day for the student participants. They were not able to participate in all of the days sessions because they had to return to school. The large amount of material indicates that a way for them to stay later be investigated.

Summary Evaluations from the Attendees

| Evaluation and Feedback (0-4) 4 being the highest | |
|---|----------------|
| General Questions | Average |
| The workshop/conference objectives were clear. | 3.9 |
| The length of the workshop was sufficient to cover the subject matter | 3.3 |
| Overall, the workshop instructors and speakers were effective. | 3.9 |
| I learned new information in this workshop. | 4.0 |
| I'd like to learn more about IT/IA and Cybersecurity | 3.0 |
| I may consider Cybersecurity as a career choice | 3.2 |
| Speaker's Presentations | |
| 0 - 4 scale, with 4 being strongly agree | |
| Maryland's First Lady Kendel S. Ehrlich | 2.9 |
| Detective Sergeant Robert Smolek | 3.9 |
| Naomi Lefkovitz FTC | 3.4 |
| Casey O'Brien Information Security | 3.4 |
| Ron Teixeira National Cyber Security Alliance | 3.8 |
| Craig Holcomb NSA | 4.0 |
| | Average |





How could this workshop be improved?

- I thought this was a great opportunity
- Perhaps more time to meet with people

Please list any additional comments or suggestions

- I really enjoyed learning about the coding, this was very interesting
- I loved the food I wish school lunch was like this
- I didn't realize the police department had other areas
- You always have such great opportunities for the girls to learn about college campus, college and the fields associated with technology and security. I hope we can continue to bring them to campus (guidance counselor)