Maryland Commission on Cyber Security Innovation and Excellence
Office of Legal and Government Affairs
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University of Maryland
University College

December 23, 2011

The Honorable Martin J. O'Malley
Governor of Maryland
100 State Circle
Annapolis, MD 21401-1991

The Honorable Thomas V. "Mike" Miller, Jr.   The Honorable Michael E. Busch
President of the Senate   Speaker of the House of Delegates
H-107 State House   H-101 State House
Annapolis, MD 21401-1991   Annapolis, MD 21401-1991

Re: Maryland Commission on Cyber Security Innovation and Excellence Interim Report
     State Government Article § 9-2901 (2011)
     MSAR # 8701

Dear Governor O'Malley, President Miller and Speaker Busch:

Pursuant to Chapter 251 of 2011, the Maryland Commission on Cyber Security Innovation and Excellence respectively submits an interim report of its work. The Commission was created by House Bill 665 and is charged with producing a comprehensive overview of current state cyber security laws and policies and developing recommendations for a coordinated, rapid response to cyber attacks on our government networks and computer systems. It will also develop a strategic Road Map for making Maryland the national epicenter and leader in cyber security to create jobs and cutting edge cyber innovations, generate revenues, and support a knowledge base economy. The Commission will also provide recommendations for attracting private investment, and promoting innovation through public and private partnerships, research and development, workforce training, and education.

On behalf of the Commission, we are pleased to submit to you the interim report as directed by House Bill 665. This interim report is an outline of the Commission's preliminary findings and will set the framework for the work of the Commission over the next three years.

We would like to express appreciation to the members who serve on the Commission. We look forward to working with the Governor's office and members of the General Assembly.

Sincerely,

Susan C. Lee   James "Ed" DeGrange
Co-Chair   Co-Chair
Maryland House of Delegates   Maryland Senate
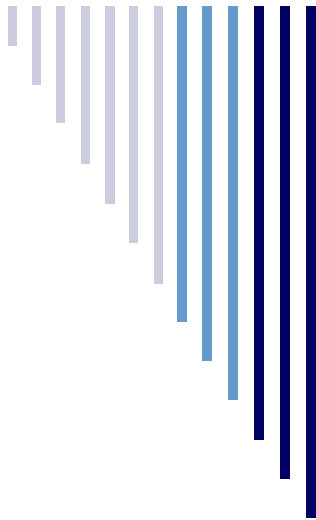
Maryland Commission on Cyber Security Innovation and Excellence

INTERIM REPORT OF FINDINGS AND RECOMMENDATIONS

DECEMBER 23, 2011

Executive Summary

The Maryland Commission on Cyber Security Innovation and Excellence (the "Commission") was created to ensure the State of Maryland develops comprehensive, coordinated, and rapid response strategies for proactively protecting the state against cyber attacks; and for making the state the leader in cyber innovation and jobs creation. The Commission has two major components:

- First, providing proactive, comprehensive, rapid response strategies for fighting cyber attacks against our state networks and infrastructure. This includes conducting a comprehensive overview of current state law and policies; current and proposed federal laws and policies; preemption issues; international laws and treaties; privacy issues; and other related issues. In addition, the Commission will also review how we could better work, coordinate, and partner with federal government agencies. The Commission will produce its recommendations on proposed legislation and policies in addressing those issues.

- Secondly, the Commission will provide a Strategic Road Map for making Maryland the leader and national epicenter for cyber security, innovation, and jobs that fuel a knowledge based economy. This would include a strategy to coordinate federal and state resources to attract private sector investment and jobs creation; promote public and private partnerships and research and development; protect intellectual properties; leverage federal funds for research and development and commercialization; facilitate collaboration between cyber companies and higher education institutions, promote STEM or science, technology, engineering, and mathematics courses at all educational levels, make our Maryland higher education institutions not only the leader in this field, but also a pipeline for developing a workforce in cyber security at all levels; identify a state agency to run a pilot cyber security program; and designate a Cyber Security Policy Official to coordinate our cyber strategies.

The work of the Commission follows the work of the Department of Business and Economic Development (DBED) which released a report in January 2010 entitled *CyberMaryland*, which details the State's current cybersecurity assets and discusses strategies to further promote this new industry. DBED interviewed 50 cybersecurity stakeholders in Maryland to assess how best to participate in national cybersecurity activities, reviewed literature and data to benchmark the State's industry, and convened with relevant agencies to coordinate activities in an effort to make Maryland a leader in cybersecurity policy and industry. DBED is continuing to inventory the State's cybersecurity assets.

According to the *CyberMaryland* report, the United States has the world's 9th highest rate of PC virus infection with 58% of our nation's computers affected in some way. In 2009, the number of U.S. computers infected with viruses, worms, or other malware rose by a staggering 600%. Many of these infections not only strike private computer systems, but are directed at government networks. In 2008, the Department of Defense logged nearly 360 million hacking

attempts and in June of 2009, a massive cyber attack affected some of our nation's most secure computer systems, including those at the Department of Defense and the White House.

Maryland has become a hub of cyber security activity as it has within its borders many federal agencies, which include the National Security Agency, the Intelligence Advanced Research Projects Activity, the National Institute of Standards and Technology, and the Defense Information Systems Agency. In addition, Maryland will be the future home of the U.S. Cyber Command headquarters and will host the Department of Defense expansions of the intelligence and communications responsibilities at Fort Meade and at Aberdeen Proving Ground.

History and Goals of Commission

The Commission was created when Governor Martin O'Malley signed House Bill 665 on May 10, 2011. The establishment of the Commission is codified in Md. Code Ann. State Gov't § 9-2901 (2011). In accordance with that statute, the "purpose of the Commission is to provide a road map for making the State the epicenter of cybersecurity innovation and excellence." Md. Code Ann. State Gov't § 9-2901(f) (2011).   The University of Maryland University College (UMUC) is responsible for staffing the Commission.

The Commission was created to:

(1) conduct a comprehensive review of and identify any inconsistencies in

> (i) State and federal cybersecurity laws; and
>
> (ii) policies, standards, and best practices for ensuring the security of computer systems and networks used by educational institutions and State government and other organizations that work with health care records, personal identification information, public safety, and public service and utilities;

(2) conduct a comprehensive review of the State's role in promoting cyber innovation;

(3) identify any federal preemption issues relating to cybersecurity;

(4) provide recommendations for:

> (i)   a comprehensive State framework and strategic plan for cybersecurity innovation and excellence;
>
> (ii) a comprehensive State strategic plan to ensure a coordinated and adaptable response to and recovery from attacks on cybersecurity;
>
> (iii) coordinated and unified policies to clarify the roles and responsibilities of State units regarding cybersecurity;

(iv) growth opportunities and economic development strategies and action plans; and

(v) strategies that can be used to coordinate State and federal resources to attract private sector investment and job creation in cybersecurity;

(5) make recommendations regarding:

(i) methods the State can use to increase cybersecurity innovation by:

1. promoting public and private partnerships, research and development, and workforce training, education, and development;

2. promoting science, technology, engineering, and mathematics courses in all levels of education;

3. helping companies transfer research to product;

4. protecting intellectual properties; and

5. leveraging federal funds for research, development, and commercialization;

(ii) methods that the State can use to promote collaboration and coordination among cybersecurity companies and among institutions of higher education located in the State;

(iii) a unit of State government that is suitable to run a pilot program regarding cybersecurity; and

(iv) the designation of a cybersecurity policy official that would be responsible for coordinating the State's cybersecurity policies, strategies, and activities.

Preliminary Findings

The Governor appointed the Commissioners a few months ago. The Commission held an introductory meeting of the appointees on November 22, 2011. At that meeting, Senator DeGrange and Delegate Lee welcomed the Commission members and thanked them for their service. Delegate Lee provided information regarding HB 665 which authorized the Commission, as well as HB 778 which amended § 7-302 of the Criminal Law article which made it a felony to attack state government databases and public service companies and utilities as well as provided for greater penalties for individuals who are guilty of such crimes.

Once the Commission appointees introduced themselves and also provided information regarding what they hoped would be the outcomes from the work of the Commission, the

meeting was dedicated to an open discussion on the goals of the Commission. The members of the Commission discussed several issues including the following:

- Although the Commission should not recreate what is already available, it is important to collect information on the various cybersecurity initiatives currently occurring in Maryland so they can be catalogued. UMUC is in the process of developing a website for the work of the Commission which could house this catalog.

- Developing a template for a state agency to enact a proactive rapid response to cyber attacks that can be utilized by other agencies in and out of Maryland.

- The need to create a strategic roadmap to increase Maryland's relevance in cyber innovation by developing commercialization strategies to better assist cyber innovators in transferring their research or innovation to product and other related commercialization issues.

- In terms of future planning for cybersecurity initiatives, the members of the Commission recognize the strengths that Maryland already has in this area and build on the gains already made, including those measures which need to be addressed.

- The educational component of cyber security issues including educating the general public about the importance of cyber security and taking proactive steps to protect themselves against such potential attacks.

- The importance of increasing and continuing support of our higher education institutions, like UMUC, in educating and serving as a pipeline for cyber related jobs at all levels, thereby supporting a knowledge based economy in Maryland.

Next Steps

Commission Co-Chairs Senator DeGrange and Delegate Lee are planning to hold a full Commission meeting followed by a reception with members of the General Assembly in January or February of 2012. At that meeting, the Commission members will discuss more specific goals, focus, work, and activities the commission will undertake through 2014.

Commission Membership

The Co-Chairs of the Commission are:

- **Susan Lee**, Co-Chair, Delegate, District 16, Maryland House of Delegates
- **James DeGrange**, Co-Chair, Senator, District 32, Maryland Senate

The other appointed members of the Commission are:

- **Rosemary Budd**, President, Fort Meade Alliance
- **Russell Butler**, Executive Director/Attorney, Maryland Crime Victims' Resource Center, Inc.
- **Chieh-San Cheng**, President & CEO, Global Science & Technology, Inc.
- **Larry Cox**, Senior Vice President and Business Unit General Manager, Science Applications International Corporation
- **Darrell Durst**, Vice President, Lockheed Martin
- **Sean Fahey**, Research and Development Program Manager John Hopkins University Applied Physics Laboratory
- **Frederick Ferrer**, Director, Cyberspace ARINC
- **Derek Gabbard**, Founder & CEO Lookingglass Cyber Solutions, LLC
- **Rick Geritz**, CyberHive LLC
- **Barbara Gonzalez**, Engineer, Pepco Holdings, Inc.
- **Michael Greenberger**, Law School Professor & Director, University of Maryland Center for Health & Homeland Security
- **Elizabeth Hight**, Vice President, Cybersecurity Practice Hewlett Packard
- **Clay House**, Vice President Architecture, Planning, and Security Carefirst BCBS
- **Christian S. Johannson**, Secretary of the Business and Economic Development
- **Belkis Leong-Hong**, Founder, President & CEO Knowledge Advantage Inc.
- **Larry Letow**, TCM Chairman and President and COO, Tech Council of Maryland
- **Terry Lin**, CEO, Planned Systems International, Inc.
- **Randy Meyers**, Security Manager, Federal Deposit Insurance Corporation
- **Katherine Michaelian**, Instructional Dean, Montgomery College
- **Robert A. Rosenbaum**, Executive Director, Maryland Technology Development Corporation
- **Alexander M. Sanchez**, Secretary of the Department of Labor, Licensing, and Regulation
- **Elliot H. Schlanger**, Secretary of Information Technology
- **David Wilson**, President, Morgan State University

In addition, in accordance with House Bill 665, the Governor will invite representatives from specific federal agencies to serve on the Commission. Those agencies and their representatives or designees are:

- **Director of the National Institute for Standards and Technology**
- **Secretary of Defense**
- **Director of the National Security Agency**
- **Secretary of Homeland Security**
- **Director of the Defense Information Systems Agency**
- **Director of the Intelligence Advanced Research Projects Activity**

The Commission Co-Chairs are working with the Governor's Office on these invitations.

The Commission is staffed by the following representatives from University of Maryland University College:

- **Greg von Lehmen**, Provost
- **Nancy Williamson**, Vice President & General Counsel