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Testimony in Support of
HB 824 (Public Schools – Cyber Safety Guide and Training Course – Development, Implementation, and Reporting)

Sponsor: Delegate. P Young

House Ways and Means Committee
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Chairwoman Kaiser, Vice Chairman Washington, and members of the Committee thank you for the opportunity to provide testimony on HB 824.

I am Dr. Loyce Best Pailen, the Senior Director for the Center for Security Studies at the University of Maryland Global Campus. I had worked in the technology field for over 30 years, long before we knew that computer risk management, network troubleshooting, and secure software development would morph into what we now call the field of cybersecurity. My IT background includes technology project management, programming, network administration, cybersecurity curriculum development, and grant management.

While I develop curriculum and teach cybersecurity in higher education, I have also focused on the need to introduce cybersecurity concepts into K-12 curriculum and into the home environment throughout my career. Several years ago, I participated in the MSDE Computer Science Curriculum working group to advance K-12 cybersecurity curricular standards. More recently, I have authored several children's books about cybersecurity-related topics such as ransomware, the internet of things, privacy and identity theft, cloud computing, and careers in cybersecurity.

As a long-time IT professional and educator, I have witnessed an ever-growing need for cybersecurity awareness and training. The tools and resources needed for such awareness run the gamut of national and local government standards development, public and private cybersecurity working groups, industry training, academic opportunities, special research grant funding, and where we are today with state legislation.

I stress that all of these avenues are needed, and more, as the concerns about safe online practices for students, parents, and school employees grow. The awareness was needed before the COVID-19 pandemic, and, now with increased virtual learning, the issues have increased exponentially. The mere fact is that more online users will lead to more misuse in the areas of sharing private information and communicating with strangers, posting inappropriate content, joining groups that are not age-appropriate, and misusing computers, smartphones, and tablets for nefarious activities.

In 2016, the Center for Cyber Safety and Education conducted a study, *Children's Internet Usage*, the findings of which unfortunately still hold true today. For instance, the report noted

that cybersecurity training is happening in schools, and children learn (or should we say, hear the message). However, due to lack of parental vigilance, much of what is taught about cyberbullying, safety online, social media, and care using technology are lost. Inadequate teacher professional development opportunities also inhibit the effectiveness of the training. HB 824 could positively impact this situation by providing an additional layer of due diligence for parents, students, teachers, and school employees. The Center's report says, "*While these dangers have been documented in the past, perhaps they need to be made more resonant for today's parents and children.*" This statement is still true today.

While we still face the issues of 2016, by no means have we stood still.

- Like the **Center for Cyber Safety and Education**, we have many public and private organizations dedicated to cybersecurity awareness and education for government agencies, commercial entities and, the K-12 community.
- Several counties and school districts are already implementing some type of awareness training for their student, teachers and employees.
- Under a grant from the NSA, in the summer of 2019, **UMGC** held a successful K-12 GenCyber teacher camp to support the effort. Maryland teachers were given intense training, curricula, labs, computer equipment, and ongoing support to enable them to spread cyber awareness to their students.
- Organizations like the K-12 working group of the **NIST National Initiative for Cybersecurity Education (NICE)** lead efforts to develop cyber curriculum, aggregate resources, share talent, and match stakeholders with the K-12 cybersecurity and STEM educator audience in support of growing the cybersecurity workforce of the future.
- As part of their many activities, **The Maryland Center for Computing Education (MCCE)** collaborates with various academic institutions to support Maryland educators' cybersecurity awareness professional development opportunities.

Under my leadership, UMGc has collaborated with these entities to push forward the cybersecurity awareness agenda. Too numerous to summarize, other organizations tackling the problem of cybersecurity awareness in the K-12 arena include the National Cybersecurity Alliance, 2016 research findings: CCEI, K-12 Cybersecurity Resource Center, the Maryland Computing Ed Workgroup, and the CSTA.

Finally, I put forth the idea that this effort to enhance awareness efforts could educate and inspire a more intelligent generation of technology users, educators, and parents. My support can be summarized in that the bill

- Includes those individuals who have the most influence over students (parents and teachers and school counselors, particularly),
- Provides realistic training about how to use the web safely, making the entire school system and its data resources more secure from malicious actors and
- Introduces students to cybersecurity at an earlier age and might cause them to think about cyber as a career.

The COVID-19 climate of virtual learning has taught us a lot about the importance of parental-teacher involvement and oversight of their children's virtual activities, which will last long after the pandemic has ended. This bill is a significant investment in correcting cybersecurity's human factors that plague our information technology systems and environments by involving parents as well as teachers and counselors.

Thank you again for the opportunity to provide testimony here today. As an educator and parent, I encourage a favorable report of HB 824.