Annual Report

Joint Commission on Technology and Science

2022 Final Report

http://dls.virginia.gov/commission/jcots.htm

The Joint Commission on Technology and Science (the Commission) met three times in 2022 with Delegate C.E. Cliff Hayes, Jr., chair, presiding. The Commission discussed topics including digital education tools and accessibility, the Internet of things (IoT), ransomware, the semiconductor industry, nanotechnology, content authenticity, and health inequities in the Commonwealth. Materials presented at the meeting are accessible through the *Commission's meetings webpage*. Full videos of each meeting are archived on the *House video streaming webpage*.

Information presented at the meetings is summarized here.

Membership

Delegate C.E. Cliff Hayes, Jr. (chair)	Senator Ghazala F. Hashmi	Delegate Glenn R. Davis Jr.
Senator John A. Cosgrove Jr. (vice-chair)	Senator David W. Marsden	Delegate Eileen Filler-Corn
Senator Adam P. Ebbin	Delegate Mike A. Cherry	Delegate Suhas Subramanyam
Senator Barbara A. Favola	Delegate A.C. Cordoza	Delegate Michael J. Webert

A study was conducted during the 2022 interim of HB 1246 to discuss accessible digital tools in education:

The full study can be found *here*.

The Commission met on August 17, 2022, in Richmond to discuss the following topics:

Election of Chair and Vice-Chair

Pursuant to subsection D of § 30-86 of the Code of Virginia, at the first meeting following the adjournment sine die of the Regular Session in an even-numbered year, JCOTS shall elect a chairman and vice-chairman from among its membership. After a point of order to clarify the traditions of the Commission's elections in the past, Delegate Hayes was nominated and confirmed to continue his position as the Commission's chair. Senator John A. Cosgrove, Jr., was then nominated and elected to serve as the Commission's new vice-chair.

Legislative Update and Interim Work Plan

Staff provided a brief overview of the 2022 Regular Session of the General Assembly. One bill was referred to the Commission for study. HB 1246 (Tran, 2022), which was passed by the House but continued to the 2023 Session by the Senate, requires the Department of Education to convene a work group to provide input and recommendations to the Department of Education, the Board of Education, and the General Assembly no later than November 1, 2022, regarding (i) ways in which school divisions can effectively identify and receive responsive and responsible bids from vendors to procure digital tools, including online platforms, courses, digital applications, information and communication technology services, and digital content, that comply with the federal accessibility standard and (ii) any statutory or regulatory changes that may assist school divisions to procure such digital tools that comply with such standard.

Senator Cosgrove urged the Commission to consider the use of tri-cranial devices and hyperbaric oxygen therapy for treatment for post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI) within the military. Delegate Hayes also proposed a long-term study of ransom-ware attacks and possible avenues the government can take to prevent them and handle them when such prevention methods fail.

The Commission agreed to study the following topics during the interim: HB 1246, tri-cranial devices and hyperbaric oxygen therapy for the treatments of PTSD and TBI within the military, and ransom-ware attacks.

Electronic Meeting Policy

Staff presented the Commission the option to consider an electronic meeting policy where members would be able to carry out their meeting duties electronically.

The following is a summary of the information presented at the Commission's meeting on October 18, 2022, in Richmond:

HB 1246 Work Group Study Update

Staff provided an update on the progress of the work group that is studying the provisions of HB 1246 (Tran, 2022), which was referred to the Commission by the Senate Committee on Finance and Appropriations. Staff met with a work group of representatives from various agencies,

associations, and advocacy groups regarding digital education tools and digital accessibility and received recommendations and information on the topics, including (i) accounts of the student and parent experience with accessible and inaccessible technology; (ii) a report on digital accessibility in K-12, higher education, and some state agencies; and (iii) recommendations for baseline requirements for digital tools procured for education based on existing standards, such as the Web Content Accessibility Guidelines from the Web Accessibility Initiative of the World Wide Web Consortium and Section 508 of the federal Rehabilitation Act of 1973. Commission staff is currently compiling resources, information, and input to include in the study and estimates that a final report will be completed by November 1.

Overview of Commonwealth of Virginia Engineering and Science (COVES) Fellowship Research

Amit Seal Ami, COVES Fellow

Mr. Ami joined the meeting virtually to present his study on the Virginia Consumer Data Protection Act (VCDPA) and the Internet of things (IoT)/smart homes. As part of his study, he analyzed existing policies on the VCDPA, ransomware, and next generation televisions and created policy briefs on IoT and ransomware. Mr. Ami recommended that the Commission introduce legislation to develop explicit guidelines for how privacy notices for devices, websites, and services are distributed to consumers and to create standards for communicating such privacy notices in order to facilitate the automated analysis of such privacy notices and compliance enforcement. Mr. Ami also presented recommendations to address consumer privacy concerns with next generation televisions.

Delegate Hayes thanked Mr. Ami for his research and urged the Commission to consider how these topics will be enforced moving forward.

Presentation: Key Strategies to Position Virginia for Leadership in Areas of Critical National Challenge (2022)

Dr. James Aylor, President, Virginia Academy of Science, Engineering and Medicine (VASEM)

Dr. Aylor provided a brief overview of VASEM and its programs and said that, in particular, its COVES Fellowship aims to strengthen the scientific technical capacity of state government, private industry, and nonprofits in Virginia by encouraging and equipping graduate students in science and engineering to be effective advisors for public policy. He asked the Commission to consider strategies for bringing federal funds to Virginia for key technology efforts and for making Virginia a leader in the semiconductor. After Dr. Aylor's presentation, Commission members discussed how Virginia could meet or address the areas for growth identified by Dr. Aylor.

The following is a summary of the information presented at the Commission's meeting on

November 22, 2022, in Richmond:

Presentation: Virginia Nanotechnology Networked Infrastructure

Masoud Agah, VNNI Founding Director

Commission members heard from Mr. Agah regarding the revitalization of the Commonwealth's semiconductor ecosystem. Virginia Nanotechnology Networked Infrastructure (VNNI) is currently partnered with several universities across Virginia such as George Mason University, Norfolk State University, Virginia Commonwealth University, and the University of Virginia. VNNI is hoping to grow the workforce in semiconductor industries, foster innovation, expand Virginia's advanced technology talent, and attract new businesses. Mr. Agah believes high school students are the driving force for the next generation, and programs or curricula focused on microelectronics and nanotechnology should be created for them. Mr. Agah stated that the General Assembly could support this initiative by either writing a letter of support or passing a resolution that states its support for these programs.

Presentation: Content Authenticity Initiative

Nick Gatz, Senior Manager, Government Relations, Adobe

Mr. Gatz presented on the topic of manipulated content, and specifically content that is manipulated with the intent to harm, such as deepfakes. Adobe's Content Authenticity Initiative focuses on provenance technology, which allows users to see important data relating to an image, and transparency. Companies currently on board with this initiative include the New York Times, Microsoft, the Wall Street Journal, Sony, and Twitter. This initiative aims to seek means to provide consumer education, public and private collaboration to advance provenance standards, and implementation and adoption of provenance technologies. There also may be opportunities for government to use these technologies in government communications.

Presentation: Health Inequities in the Commonwealth of Virginia

Dr. James Aylor, President, Virginia Academy of Science, Engineering and Medicine (VASEM)
Dr. Steven Woolf, Director Emeritus and Senior Advisor, VCU Center on Society and Health

Dr. Aylor provided a brief introduction to health inequities in the Commonwealth and the opportunity for technology to play a major role in maximizing health care resources for all citizens across the state. Dr. Woolf emphasized the disparities in health care resources and life expectancy across the state. HealthLandscape Virginia, developed at Virginia Commonwealth University (VCU), enables data to be pulled that merges health information with specific data on each jurisdiction. Dr. Woolf stated that this information could aid in identifying potential policy solutions to improve these outcomes. He also hopes to expand efforts to merge this data with the All-Payer Claims Database to examine health care disparities across the Commonwealth and how they relate to local conditions.

For more information, see the *Joint Commission's website* or contact the Division of Legislative Services staff:

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