



Annual Report of Activities

December 2024

REPORT TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

JCOTS Membership

Delegate C.E. Cliff Hayes, Jr., Chair
Delegate Bonita G. Anthony
Delegate Mike A. Cherry
Delegate Michelle Lopes Maldonado
Delegate David A. Reid
Delegate Anne Ferrell H. Tata
Delegate Michael J. Webert

Senator Adam P. Ebbin, Vice-Chair
Senator Lashrecse D. Aird
Senator Christie New Craig
Senator Barbara A. Favola
Senator Ghazala F. Hashmi

Artificial Intelligence (AI) Subcommittee Membership

Delegate Michelle Lopes Maldonado
Delegate Anne Ferrell H. Tata

Senator Adam P. Ebbin, Chair
Senator Lashrecse D. Aird

Blockchain Subcommittee Membership

Delegate Mike A. Cherry
Delegate David A Reid
Delegate Michael J. Webert

Senator Adam P. Ebbin, Chair
Senator Barbara A. Favola

Online and Data Protections Subcommittee Membership

Delegate Bonita G. Anthony, Chair

Senator Christie New Craig
Senator Barbara A. Favola
Senator Ghazala F. Hashmi

Executive Director Hiring Committee

Delegate C.E. Cliff Hayes, Jr., Chair
Delegate Bonita G. Anthony
Delegate Anne Ferrell H. Tata

Senator Adam P. Ebbin, Vice-Chair
Senator Lashrecse D. Aird
Senator Christie New Craig

Executive Director

Jodi Kuhn

Annual Report of Activities

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Executive Summary

The Joint Commission on Technology and Science (the Commission) met six times in 2024 with Delegate C.E. Cliff Hayes, Jr., chair, presiding. In response to assigned legislation, three subcommittees were formed and met a total of 11 times. The Commission and its subcommittees discussed topics including artificial intelligence, practical uses of blockchain, privacy and other protections for children, and litigation in other states. Two bills were recommended by JCOTS, two bills were recommended in concept, and two bills were recommended with considerations.

The passing of HB 1199 enabled the hiring of two dedicated full-time positions. A hiring committee was established in June and an Executive Director was hired in September. The Executive Director hired a Chief Policy Analyst who began in November.

JCOTS Full Commission

The following is a summary of the information presented at the JCOTS full Commission meetings.

Meeting #1 - May 6, 2024

Division of Legislative Services

Division of Legislative Services (DLS) Director Amigo Wade provided information on the Executive Director hiring process authorized by HB 1199 (Hayes, 2024). Mr. Wade provided an overview of the options for the hiring process and the next steps to establish the Executive Director position. DLS will assist with the hiring process while also continuing to support the Commission until the position is filled. The Commission established a subcommittee to lead in the hiring of an Executive Director. The subcommittee will vet applicants and make recommendations to the full Commission, which will ultimately hire the candidate for the position.

Staff counsel provided members with an overview of bills and topics from the 2024 regular session that will inform the Commission's workplan. Three bills were referred to the Commission for study and require reports by December 1, 2024. Staff counsel clarified that this list of bills and topics was not exhaustive and that the Commission will likely receive other requests for studies in the coming weeks.

Other Business

Delegate Hayes requested that the Commission study the content of SB 359 (VanValkenburg), which was continued to the 2025 Regular Session by the House Committee on Communications, Technology and Innovation. The bill language would prohibit a person that operates a social media platform that has knowledge that a user of the social media platform is a child under the age of 18 from using an addictive feed, as defined in the bill, unless such social media platform obtains verifiable parental consent.

Meeting #2 - June 17, 2024

Division of Legislative Services

DLS Director Wade provided information on the hiring process for the Executive Director. The timeline of the hiring process was discussed.

Staff counsel provided an overview of the interim work plan which includes ten bills assigned between three subcommittees. A brief discussion regarding social media warning labels took place and it was recommended that this topic be discussed in the Online and Data Protections subcommittee.

Appointments of the subcommittee chairs and the assignments to the following subcommittees were made: Artificial Intelligence (AI), Blockchain, and Online and Data Protections.

Counsel reviewed the electronic participation policy and answered questions.

Other Business

Two Commonwealth of Virginia Engineering and Science (COVES) Policy Fellows were introduced: Gates Palissery, PhD Candidate, Virginia Tech, Office of Sen. Aird; and Yasasi Abeysinghe, PhD Candidate, Old Dominion University, JCOTS. The Virginia Academy of Science, Engineering, and Medicine created the 12-week COVES program to help address the critical shortage of scientists and engineers with the necessary training to be effective policy advisors.

Meeting #3 - July 17, 2024

Division of Legislative Services

DLS Director Wade provided an update on the hiring process for the new Executive Director. A subcommittee of six members has been established to oversee the hiring. The subcommittee is currently reviewing applications, and interviews will be scheduled.

Staff counsel provided updates to the Commission's work plan. Three new bills were added to the subcommittee on AI, focusing on synthetic media use and AI regulations. Additional bills were added to the Online and Data Protections subcommittee.

Presentation: Overview of AI and its Impact

Gates Palissery, PhD Candidate, Virginia Tech, COVES Fellow, Office of Sen. Aird
Yasasi Abeysinghe, PhD Candidate, Old Dominion University, COVES Fellow, JCOTS

The Commission received an introductory explanation of AI, machine learning (supervised vs. unsupervised), and neural networks. Discussion took place on the importance of training data in AI systems and the potential for bias and errors.

Presentation: Trust in AI

Ryan Harkins, Senior Director of Public Policy, Microsoft

Mr. Harkins highlighted concerns about AI's ability to generate misinformation, particularly in politics, and the need for policies ensuring transparency and accountability in AI development and deployment. The debate over privacy concerns and the ethical use of AI was discussed with a focus on data security.

Presentation: Overview of AI Legal Frameworks

Beth Waller, Esq. and Patrick Austin, Esq., Woods Rogers, on behalf of the Council of Independent Colleges in Virginia, Inc.

Ms. Waller and Mr. Austin addressed the question of "Where does the current legal landscape on AI stand?" by providing a review of global and U.S. regulatory frameworks concerning AI.

There was discussion of the EU's AI Act and its impact on Virginia businesses operating globally. This included an overview of the first comprehensive AI law in Colorado and its focus on high-risk AI systems, particularly in education, finance, and employment. It was noted that many other states have targeted AI legislation such as Virginia's "deepfake" pornographic content law.

Announcement: Government Blockchain Technology Showcase

Greg Leffel, Executive Director, Virginia Blockchain Council

Mr. Leffel shared information on a blockchain event discussing real-world use cases for blockchain.

Presentation: Advancing Blockchain and Digital Assets Safely and Soundly — Opportunities and Challenges

Stephen Gannon, Partner, Davis Wright Tremaine LLP, on behalf of the Virginia Bankers Association

Mr. Gannon explained how blockchain technology can improve financial services by increasing speed, reducing costs, and enhancing security. He noted regulatory challenges include consumer protection, privacy, and financial sanctions and that U.S. banking regulators remain cautious about the widespread use of digital assets in traditional banking. Opportunities exist for tokenizing assets and using blockchain for efficiency in remittances and cross-border payments. He noted the potential for blockchain to improve transparency and speed in state services, especially in benefit distribution.

Meeting #4 - September 4, 2024

This was a closed meeting to vote on the final candidate for the Executive Director position.

Meeting #5 – November 6, 2024

Presentation: A Device-Based Age Assurance Mechanism

Bob Cunningham – Global Head of Policy, International Centre for Missing and Exploited Children

Mr. Cunningham spoke about the challenges of existing age verification laws which require per-platform verification. He expressed that the current laws are ineffective, raise privacy concerns, and are facing constitutional challenges. Device-based age verification, implemented through the proposed Digital Age Assurance Act (DAAA), would verify a user's age once on their device, enabling websites and services to verify a user's age without requiring repeated verification or personal information disclosure to each individual platform or application. Mr. Cunningham emphasized the DAAA's potential for promoting child safety while respecting user privacy and minimizing constitutional concerns.

Senator Ebbin asked questions relating to potential limitations of this method such as multiple users on one computer or verification that a child enters their correct age. Mr. Cunningham stated that this solution does not take the place of parental oversight to ensure that the correct age is entered into the operating system. He noted that states have largely relied on the platform method, which is being litigated in several states due to constitutionality concerns. Drawing from their internal assessment, Mr. Cunningham stated that the device-based method addresses all of the concerns in those cases.

Subcommittee Recommendations and Voting

Online and Data Protections

Delegate Bonita G. Anthony, Subcommittee Chair

Delegate Anthony brought two bills forward to be voted on by the full commission: SB 252 - Consumer Data Protection Act; controller privacy notice, consumer consent. ("Cookie" opt-out) and SB 359 - Consumer Data Protection Act; social media platforms; addictive feed. The motion for JCOTS to recommend both bills passed unanimously.

Blockchain

Senator Adam P. Ebbin, Subcommittee Chair

Senator Ebbin presented one recommendation from the Blockchain Subcommittee. The recommendation is for the creation of a Blockchain Advisory Committee within JCOTS.¹ Senator Salim will chair this subcommittee to study blockchain applications and potential benefits for Virginia. Senator Ebbin read the proposed membership and suggested an amendment to add a representative from a Virginia Credit Union. The motion for JCOTS to recommend the formation of the subcommittee, with the amendment, was passed unanimously.

Presentation: 2024-25 Planning

Jodi Kuhn, Executive Director

Ms. Kuhn presented the core values, responsibilities of JCOTS staff, and guiding principles of JCOTS staff.² She provided administrative updates including staffing, external support on subcommittee reports, and a request for the Commission to endorse a budget request for two additional staff. Ms. Kuhn gave examples of five staffed commissions that have between 3 and 11 staff members.

Delegate Reid asked whether JCOTS would be expanding their reports to include data centers. Ms. Kuhn noted that she has already spoken to the Commission on Electric Utility Regulation, however they were waiting for the JLARC report to be issued before deciding on a specific focus area. The motion to approve both the Core Values and the budget request for two full-time positions passed.

¹ Appendix I

² Appendix II

Meeting #6 – December 3, 2024

Call to order

Delegate C.E. Cliff Hayes, Jr., JCOTS Chair

Chair Hayes reflected on what a significant milestone it is to have full-time staff with the hiring of an Executive Director and now a Senior Policy Analyst. He introduced Dr. Kira Allmann and highlighted the work she has done in researching broadband accessibility. Chair Hayes indicated that her work is consistent with the efforts to expand broadband access across the Commonwealth, particularly in rural areas.

Presentation: Constitutionality and Online Protections

Bertrall Ross, Professor of Law, UVA

Professor Ross covered the current legal framework by providing an overview of laws concerning online protections for minors. He went over topics including harmful-to-minors laws (pornography and explicit content), social media age verification and parental consent requirements. In addition, Professor Ross reviewed a variety of legal precedents that highlighted the challenges of balancing online child protection with freedom of speech.

Members asked questions including how Virginia can ensure compliance with online protection laws while avoiding legal pitfalls and how best to identify and define issues such as “harm to children.”

Subcommittee Recommendations and Voting

Artificial Intelligence

Senator Adam P. Ebbin

Senator Ebbin presented four bills recommended to be voted on by the full Commission. HB 697 Synthetic Media, SB 164 Digital Replication Rights Act, SB 487 High Risk AI for public bodies, and HB 747 High Risk AI Developer Act (private sector). SB 487 and SB 164 were endorsed by the full Commission and HB 697 and HB 747 were endorsed in concept, due to the final versions not yet being available.

Report Overviews

Jodi Kuhn, Executive Director

Ms. Kuhn reviewed the recommendations from the Online and Data Protections and AI reports, respectively.

Other Business

1. Delegate Anthony raised concerns about overlap between Executive Order 43 and the responsibilities of JCOTS. In order to minimize waste and clearly delineate roles, she asked for JCOTS to send the Governor’s office a letter and for JCOTS to be represented on the Reclaiming Childhood Taskforce.

2. Senator Craig presented the concept of a device-based age verification bill. This is a result of the presentation at a previous JCOTS meeting (November 6, 2024) by the International Center for Missing and Exploited Children. She submitted a draft request to DLS and would like feedback from JCOTS members as well as to know if anyone would patron the bill.
3. There was public testimony regarding two of the bills that have been reviewed in the AI and Online and Data Protections subcommittees.

Artificial Intelligence (AI) Subcommittee

The following is a summary of the information presented at the Commission's Artificial Intelligence (AI) Subcommittee meetings.

The Subcommittee reviewed and made recommendations on the following bills:

- SB 487: Directs JCOTS, in consultation with relevant stakeholders, to conduct an analysis of the use of artificial intelligence by public bodies in the Commonwealth and the creation of a Commission on Artificial Intelligence. A report of findings is due no later than December 1, 2024.
- HB 747: Artificial Intelligence Developer Act; established, civil penalty.
- SB 164: Virginia Consumer Protection Act; prohibited practices, artificial intelligence disclosure.
- HB 249: Law-enforcement agencies; use of generative artificial intelligence and machine learning systems.
- HB 251 : Criminal justice agencies; audiovisual surveillance technologies.

Meeting #1 - July 17, 2024

Presentation: AI Tools: Exploring AI Types and Integration in Modern Applications

Yasasi Abeysinghe, PhD Candidate, Old Dominion University, COVES Fellow, JCOTS

Ms. Abeysinghe introduced the types of AI, common uses, and the integration of AI into everyday tools. She highlighted the diversity of uses of AI technology.

Presentation: AI Definitions and Virginia AI Policies

Gates Palissery, PhD Candidate, Virginia Tech, COVES Fellow, Office of Sen. Aird

Ms. Palissery introduced several definitions of AI and described the importance of a meaningful definition that was not too narrow or broad as to unintentionally include or exclude technologies. She reviewed the policies that are already in place through VITA.

Senator Ebbin recommended that actions such as adopting a definition of AI be tracked and considered by the subcommittee during future meetings. Senator Aird noted that some of the proposed legislation that the subcommittee will be reviewing includes definitions.

Division of Legislative Services

Staff counsel provided updates to the subcommittee's work plan including a listing of the five bills to be covered by the subcommittee.

Meeting #2 - September 3, 2024

Division of Legislative Services

Staff counsel provided an update on the interim work plan for AI-related legislative activities.

Remarks from the Chair

Senator Adam P. Ebbin, AI Subcommittee Chair

The subcommittee encouraged public comments, with emphasis on receiving input specifically on SB 487 and HB 747. The committee asked stakeholders to submit written comments via email, particularly if they were unable to attend the upcoming meetings. The committee noted the importance of hearing from public stakeholders, government entities, and private sector representatives before making final recommendations.

Presentation: An Outline of Potential AI Legislation

Gates Palissery, PhD Candidate, Virginia Tech, COVES Fellow, Office of Sen. Aird

The Commission received an in-depth presentation on potential AI legislation for Virginia, comparing it with laws in other states such as Colorado (SB 24-205 and SB 22-113), Maryland (SB 818) and Connecticut (SB 1103).

Ms. Palissery referenced the European Union (EU) AI Act's definition of AI, which was used in Colorado's AI legislation. She discussed how Virginia might adopt a similar framework to define high-risk AI systems. The presentation emphasized the importance of avoiding algorithmic discrimination by AI systems, particularly when proxies like zip codes are used, which could lead to indirect racial discrimination.

Consistent with Colorado's SB 24-205, Virginia's HB 747 details documentation that must be provided by developers and deployers of high-risk AI systems. Ms. Palissery suggested taking an opt-in approach for citizens' data to be used to train future models. The subcommittee discussed VITA's existing policies and recommendations were made to review and possibly add further detail to these policies.

Discussion: SB 487 & HB 747

Members discussed the presentation's insights, potential applications for Virginia, and whether to draft one comprehensive AI bill or continue to develop multiple smaller bills focused on different aspects of AI regulation. They also discussed enforcement mechanisms and the civil penalty provision in HB 747 wherein the Attorney General can issue penalties ranging from \$1,000 to \$10,000 for anyone who willfully violates any provision of the bill.

The definitions used in the bills will likely align with similar legislation in other states. SB 487 includes forming a commission to oversee AI and broader technological developments. Members discussed whether this commission should focus solely on AI or encompass other emerging technologies like quantum computing, but no formal recommendations were made.

Other Business

Senator Ebbin directed staff to work with Senator Aird and Delegate Maldonado to draft language, merging the two bills, to present at the next meeting. Senator Ebbin also directed staff to invite stakeholders from the Virginia IT Agency, Virginia Municipal League, and Virginia Association of Counties, for engagement at the subcommittee's next meeting. The Attorney General's office would also be consulted on its enforcement role. Members suggested including labor organizations and academia to ensure a wide range of perspectives.

Meeting #3 - September 16, 2024

Presentations: Overview of Assigned Bills

SB 164. (Reeves) Virginia Consumer Protection Act; prohibited practices AI Disclosure.

Ben Sheffner, Attorney, Motion Picture Association

The Motion Picture Association presented the dangers of AI being used to replicate actors' likenesses without permission and for members to consider how AI falls into existing laws that would already prohibit such actions. The federal "No Fakes Act" was discussed, which seeks to establish a federal intellectual property right over one's likeness and voice to prevent unauthorized AI-generated replicas while preserving artistic freedoms. The intent is for this to create the standard, however it is uncertain whether it will pass. Members asked questions and posed scenarios that were addressed by the speaker.

HB 249. Law-enforcement agencies; use of generative AI and machine learning systems & HB 251. Criminal Justice agencies; audiovisual surveillance technologies.

Delegate Jackie Hope Glass

Delegate Glass presented HB 249, which regulates law enforcement's use of generative AI and machine learning, focusing on decision-making and interrogation practices. HB 251, also introduced by Delegate Glass, addresses the use of AI surveillance technologies, calling for ethical guidelines and oversight to ensure civil liberties are upheld.

Delegate Glass stressed the importance of clear policies from the Department of Criminal Justice Services to establish the standards and regulate law enforcement's use of AI. Law enforcement representatives raised concerns about limited resources and the challenge of responsibly implementing AI technologies.

HB 697. Synthetic media; use in furtherance of crimes involving fraud, etc., report.

Delegate Michelle Lopes Maldonado, JCOTS

Delegate Maldonado introduced HB 697, a companion to Senator Ebbin's SB 571, which addresses the growing threat of synthetic media (deepfakes). The bill strengthens consumer protections against fraud or defamation resulting from synthetic media and establishes civil penalties for violations.

SB 487. Direct JCOTS, in consultation with relevant stakeholders, to conduct an analysis of the use of artificial intelligence by public bodies in the Commonwealth and the creation of a Commission on Artificial Intelligence.

Senator Lashrecse Aird, JCOTS

Senator Aird clarified how the new version of this bill differs greatly from previous versions, and she has taken much of the public's feedback in revising the bill. The new language mandates impact assessments, continuous monitoring, and procurement standards for public use of high-risk AI technologies. Senator Aird clarified that the bill is limited to high-risk AI and reassured public bodies that basic productivity tools are exempt from regulation.

The Chair noted there were several written comments from the public as well as in-person comments. Comments included concerns about the difficulty of tracking AI usage across hundreds of software systems, challenges in vendor transparency regarding AI components in their software, and the overwhelming burden of compliance.

HB 747. Artificial Intelligence Developer Act; established, civil penalty.

Delegate Michelle Lopes Maldonado, JCOTS

Delegate Maldonado indicated that many of the changes that were made in the HB 747 draft were consistent with other states. She expressed a desire to have HB 747 as a code section that is referred to by other sections to reduce the need to replicate this language throughout the code. Delegate Maldonado acknowledged that this bill is unique from other states as it has civil penalties as well as general enforcement through the Office of the Attorney General.

Other Business

1. Bob Osmond, CIO of the Virginia IT Agency (VITA), provided updates on the state's AI, regulatory framework under Executive Order 30. There is a one-page application for Executive Branch agencies to register their AI. He acknowledged the shortage of AI experts and the challenges of ensuring AI use remains ethical, secure, and transparent. Mr. Osmond supported the classification of AI systems based on risk to help guide policy decisions, and he was not aware of any Executive Branch agencies that were developing high risk AI systems.
2. Several stakeholders expressed concerns about HB 747 and SB 487 including the inability to effectively identify when AI is being used in a software package as well as the burden of maintaining inventories of all software used.

Meeting #4 - October 7, 2024

The chair welcomed the new Executive Director of JCOTS, Jodi Kuhn. Ms. Kuhn introduced herself, sharing her background and gratitude to the Division of Legislative Services for their support of the Commission for over 20 years.

Presentations: Overview of Assigned Bills

SB 164. Virginia Consumer Protection Act; prohibited practices AI Disclosure. *Senator Bryce Reeves*

Senator Bryce Reeves provided an overview of his bill, stating that he introduced it to address concerns of friends who are recording artists. They are seeking protection from AI that could copy their voices and use them without consent in synthesized recordings. The bill seeks to protect artists from unauthorized replication of their voices. It also establishes legal frameworks for protecting an artist's voice as intellectual property, particularly when AI is used for replication. Delegate Reeves's goal is to help Virginia stay ahead of the curve, especially as federal legislation addressing this issue has stalled. The legislation that he is proposing mirrors a federal bill under review in Congress, modified for application in Virginia.

The Office of General Counsel of the State Corporation Commission (SCC) reviewed the bill's language and noted that it would require them to create two new databases. Challenges center around resources that may be needed to establish and maintain the databases. The SCC would seek more specific guidance before the bill's finalization.

There was public testimony in support of the bill from the music industry. Another stakeholder raised concerns that the bill's provisions might be too broad, potentially leading to unintended consequences.

HB 697. Synthetic media; use in furtherance of crimes involving fraud, etc., report. *Delegate Michelle Lopes Maldonado, JCOTS*

Delegate Maldonado emphasized the importance of consistency in definitions and indicated that this bill will create a unified legal definition for "synthetic media" (AI-generated content) across various AI-related bills. She believes that standardizing this definition is crucial to ensuring consistent application of the law as AI technology evolves.

A motion passed to endorse the bill in concept, with the understanding that the definition of "synthetic digital content" would be updated to ensure clarity and consistency with other related legislation.

SB 487. Artificial Intelligence-Public Bodies *Senator Lashrecse Aird, JCOTS*

Senator Aird highlighted several changes that she has made to the bill in response to feedback from stakeholders. Among the changes, the bill will initially only apply to state-level public bodies. Local governments will be included in future phases after a working framework is established. Language will be added to protect against algorithmic discrimination based on sexual orientation and gender identity, and additional language will be added to strengthen provisions related to data security and privacy.

A representative from local government expressed gratitude for the subcommittee's willingness to work with local governments, emphasizing the importance of collaboration in AI regulation.

HB 747. Artificial Intelligence Developer Act; established, civil penalty.

Delegate Michelle Lopes Maldonado, JCOTS

Delegate Maldonado emphasized that this bill targets AI developers who create high-risk systems that make consequential decisions, such as those involving law enforcement, financial services, or healthcare, it is not inclusive of all AI.

The bill will clarify the duty of care that AI developers must exercise, establishing a rebuttable presumption to provide developers with an affirmative defense. A right to cure will be established to give developers a limited opportunity to correct issues before facing penalties. The bill will introduce external audits to ensure continuous monitoring and compliance, especially for high-risk systems. Delegate Maldonado will make sure that small businesses are not unduly burdened by the bill's requirements.

Meeting #5 December 3, 2024

Presentation: Law Enforcement Use of ALPR Technology

Colin Drabert, Deputy Director of the Crime Commission

Mr. Drabert presented on the use of Automatic License Plate Recognition (ALPR). He explained that ALPR technology uses high-speed cameras combined with software to capture and process images of license plates. These systems may be stationary, mobile, or portable. ALPRs are widely used by law enforcement across the U.S. and have grown significantly in Virginia over the past two decades. However, regulation in Virginia remains inconsistent, with policies varying by locality. Mr. Draper's research highlighted both the benefits and challenges with ALPR and provided several suggestions including establishing clear regulations on data retention and standardizing ALPR device placements, particularly along highways.

Artificial Intelligence Report Recommendations

Jodi Kuhn, Executive Director

Ms. Kuhn provided an overview of the AI Report including a detailed description of each of the recommendations.

Legislative Draft Discussions

Digital Replication Right Act (formerly SB 164); Reeves

Senator Reeve's Chief of Staff, James Mann, provided an overview of the bill for the subcommittee. Following a brief discussion and public comment (none raised), the subcommittee unanimously approved moving the bill to the full Commission.

High Risk AI-Public Bodies (formerly SB 487); Aird

Senator Aird provided an overview of the changes that had been made to the bill. Following brief discussion and public comment (none raised), the subcommittee unanimously approved moving the bill to the full Commission.

High Risk AI-Private Sector (formerly HB 747); Maldonado.

Delegate Maldonado provided an overview of the changes that had been made to the bill. She indicated that changes were still being made, based on stakeholder feedback, and so the bill would be voted on in concept. Following brief discussion and public comment (none raised), the subcommittee unanimously approved moving the bill, in concept, to the full Commission.

Blockchain Subcommittee

The following is a summary of the information presented at the Commission's Blockchain Subcommittee meetings.

The Subcommittee reviewed and made recommendations on the following bills:

- SB 339 Directs JCOTS to conduct an analysis of and make recommendations regarding the use of blockchain technology, digital asset mining, and cryptocurrency in the Commonwealth
- SB 439 Directs JCOTS to conduct an analysis of blockchain technology and cryptocurrency in the Commonwealth and the creation of a Blockchain and Cryptocurrency Commission.

Meeting #1 - September 18, 2024

Presentation: Digital Assets – A Regulatory Perspective

Joe Face, Commissioner of Financial Institutions, State Corporation Commission

Mr. Face introduced the structure and function of the Division of Financial Institutions of the State Corporation Commission and defined digital assets and blockchain technology. He gave an overview of proposed Federal legislation for cryptocurrency. He spoke in detail regarding HB 343, which is based on the Money Transmission Modernization Act (MTMA). However, this legislation is limited to addressing fiat currency.

Presentation: When Does a Consumptive Token Become a Security?

Danny Taylor, Deputy Commissioner of Securities and Retail Franchising, State Corporation Commission

Mr. Taylor defined a security and laid out the attributes of the Howey test. He presented a case study of applying the Howey Test to a Consumptive Token.

Presentation: Decentralizing the Future: Blockchain Technology and its Use Cases

Pawan Jain, PhD Associate Professor and Department Chair, Department of Finance, Insurance, and Real Estate, Virginia Commonwealth University

Dr. Jain introduced the concepts of blockchain technology and cryptocurrency. He described smart contracts as a critical application of blockchain technology and contextualized them by providing examples in insurance and real estate.

A committee member raised concerns about smart contracts being used for fraudulent purposes. The need for guardrails was emphasized: while blockchain's immutability and transparency are strengths, there must be regulatory guardrails. These could come in the form of verification processes built into the smart contract system to check for fraudulent claims. The volatility of

cryptocurrencies was raised. Stablecoins can mitigate fluctuations by pegging their value to fiat currencies or government securities.

Presentation: Blockchain Use Cases

Alexander Mann, representing the BSV Blockchain Association and the Virginia Blockchain Council

Mr. Mann discussed practical blockchain applications in agriculture and other sectors. He outlined how blockchain technology was used to record real-time weather data for farmers in Virginia, and smart contracts tied to verified weather data allowed for automatic claims processing. Mr. Mann touched on blockchain being used in government services, such as the California DMV piloting the use of blockchain to handle car title transfers digitally, eliminating the need for in-person visits and streamlining the titling process. In addition, the Department of Defense has awarded grants to explore the use of blockchain for securing data and improving operational efficiency.

Discussion: SB 339 & SB 439

Senator Salim presented his two bills. The discussion centered around the need for an independent blockchain commission that would explore larger issues such as energy consumption and fraud risks and be able to stay abreast of federal legislation.

Meeting #2 - October 23, 2024

Taxation of Digital Assets

Jodi Kuhn, Executive Director

Ms. Kuhn discussed three primary digital assets: crypto assets (e.g., Bitcoin, Ether), stablecoins (e.g., Tether), and non-fungible tokens (NFTs). She detailed the unique attributes of each, including market-driven value for crypto assets and fiat-backed stability for stablecoins. From a federal taxation perspective, she noted that the IRS classifies digital assets as property, not currency, and form 1099-DA was introduced in 2024 to increase reporting and tax compliance for digital assets. On a state level, Virginia, like most states, treats digital assets as property but state tax guidance remains limited. The laws vary widely by state.

Members had questions about paying wages in cryptocurrency, volatility concerns, and potential benefits for states in recognizing cryptocurrency (e.g., economic growth, industry attraction).

Expert Testimony

Dennie Kim, PhD, Assistant Professor of Business Administration, University of Virginia

Dr. Kim discussed his background in healthcare and interest in blockchain for patient data security and digital ownership. He reviewed the fundamental attributes of blockchain.

Senator Ebbin asked how blockchain differed from other emerging technologies. Professor Kim described blockchain as a protocol for secure data transport and storage and emphasized its role as a digital ledger fundamentally different from the existing digital protocols. Senator Ebbin also

asked about potential benefits in studying blockchain. Professor Kim emphasized how blockchain allows for the creation of new types of technologies as well as business models. He discussed complementary roles between blockchain (focused on data ownership and traceability) and AI (focused on data ingestion and synthesis).

Review of Assigned Bills and Legislative Directives

Senator Adam P. Ebbin, Subcommittee Chair

Senator Ebbin proposed the creation of a Blockchain Advisory Committee within JCOTS, chaired by Senator Salim, to study blockchain applications and potential benefits for Virginia. The proposed membership was read, and Senator Favola suggested an amendment to add a consumer representative. The motion, with the amendment, was approved.

Online and Data Protections Subcommittee

The following is a summary of the information presented at the Commission's Online and Data Protections Subcommittee meetings.

The Subcommittee reviewed and made recommendations on the following bills:

- SB 684: Online Children's Safety Protection Act – Establishes civil penalties for entities violating children's safety online.
- SBB 432: Consumer Data Protection Act – Requires verifiable parental consent for children using online services and restricts targeted advertising for minors.
- SB 252: Consumer Data Protection Act (Cookie Opt-out) – Provides consumers the right to opt-out of cookies in web browsers.
- SB 359: Consumer Data Protection Act (Addictive Feeds) – Prohibits the use of addictive feeds for children under 18 without parental consent.
- SB 532: Social Media Restrictions for Minors – Limits hours for minors' use of social media and establishes civil liability for violations.

Meeting #1 - September 4, 2024

Remarks from the Chair

Delegate Bonita G. Anthony, Subcommittee Chair

The current focus of the subcommittee is to investigate emerging threats, review assigned legislation, and provide policy recommendations to the General Assembly on the best practices.

Division of Legislative Services

Staff counsel provided a summary of the bills assigned to the subcommittee and presented the interim work plan.

Presentation: Online Children's Privacy State Legislation and Litigation

Bill Kramer, VP, MultiState

Mr. Kramer discussed legislation across the U.S. California's Age-Appropriate Design Code Act was highlighted, which was partially blocked due to legal challenges on First Amendment grounds. He highlighted Utah as having a comprehensive set of laws, which are in the process of being implemented. This includes an age assurance system and a private right of action for adverse mental health outcomes related to social media use.

Several state laws, including those from Arkansas, Ohio, and Mississippi, have faced legal injunctions due to First Amendment concerns. Courts have yet to fully rule on the merits of many cases, leaving the future of these laws uncertain. Questions for Mr. Kramer centered around how to secure the child's identifiable information that is collected in the process of implementing the legislation in place to protect them.

Meeting #2 - September 16, 2024

Presentation: Overview of Assigned Bills

SB 359 - Consumer Data Protection Act; social media platforms; addictive feed.

Senator Schuyler T. VanValkenburg

Senator VanValkenburg presented SB 359, which prohibits social media platforms from using addictive content feeds for users under 18 unless parents opt in. The bill aims to prevent the spread of harmful and addictive content to children that negatively affects children's mental health and academic performance.

During public comments, an industry representative raised concerns about the practicality of age verification and the potential for First Amendment challenges. A tech industry representative spoke about the usefulness of customized feeds to provide meaningful content. The bill would require parental consent, which is sometimes not possible, and when provided, results in collecting more identifiable data.

The Chair verified that the onus is on the tech companies to monitor the feeds for compliance.

SB 684 - Online Children's Safety Protection Act; established, civil penalties.

Senator William M. Stanley, Jr.

Senator Stanley presented SB 684, which requires "covered entities" to conduct data protection impact assessments for products accessed by minors. It prohibits the profiling of minors and the collection of their personal data unless deemed in the child's best interest. Geolocation data cannot be collected or used, and "dark patterns" (deceptive user interfaces) are forbidden. Violations result in civil penalties: \$2,500 per affected child, \$7,500 for intentional violations.

A member asked about the data protection assessments being available to the Attorney General's office upon request versus there being a mandate for all assessments to be automatically submitted to the Attorney General. Sen. Stanley acknowledged that if they were looking for ways to make the language stronger, that would be one way to do so.

A tech industry representative raised concern about clarity in definitions including "best interest of the child."

SB 432 - Consumer Data Protection Act; protections for children. (Verifiable parental consent)

Senator David R. Suetterlein

Senator Suetterlein presented SB 432, which raises the age for minors' protections under the Consumer Data Protection Act from 13 to 18. It prohibits targeted advertising, the sale of personal data, and profiling of minors under 18. The bill passed the House previously but faced opposition in the Senate.

A tech industry representative expressed the concern that treating all minors under 18 the same could limit developmental distinctions between teenagers and younger children.

Governor Youngkin's administration spoke in favor of the bill.

SB 252 - Consumer Data Protection Act; controller privacy notice, consumer consent. ("Cookie" opt-out)

Senator Ryan T. McDougle

Senator McDougle presented SB 252, which requires companies to provide a clear opt-out option for cookies used to track user data on websites. This bill aligns with similar privacy laws in states like California and is an extension of the Consumer Data Protection Act.

A tech industry representative shared concerns about compliance with interstate commerce and the burden on businesses operating across states. There was support for consumer control over data but acknowledgment that a federal standard might be more efficient.

SB 532 - Commercial entity offering social media accounts; restricted hours for minors, civil liability

Senator Emily M. Jordan

Senator Jordan presented SB 532, which limits social media use for minors between 12:00 AM and 6:00 AM. The bill includes a parental opt-out provision, allowing parents to permit nighttime use if desired. The bill aims to combat cyberbullying and sleep deprivation among teens. This is not an amendment of the Consumer Data Protection Act.

A tech industry representative raised concerns about First Amendment rights, privacy issues, and how this can be addressed at the device level.

Governor Youngkin's administration spoke in favor of the bill and clarified that the civil liability only comes into effect if there was harm to the child.

Discussion

Senator Craig highlighted the need to protect children from the negative effects of online platforms, emphasizing parental roles and limiting the autonomy of minors online. Senator Favola raised the importance of balancing privacy with protection, suggesting that amendments may be necessary for some bills.

The Chair proposed that the subcommittee analyze the meeting's transcript and conduct further research into similar legislation across states. Stakeholders and members of the public are encouraged to submit further comments.

Meeting #3 - October 9, 2024

Introduction of JCOTS Executive Director

Delegate Bonita G. Anthony, Subcommittee Chair

JCOTS Executive Director, Jodi Kuhn, was introduced, and Ms. Kuhn reviewed the workplan that was presented at the first meeting, noting that the subcommittee was progressing on schedule. Consistent with the workplan, voting on recommendations will be conducted at the next meeting to allow the opportunity for stakeholder feedback.

Presentation: Update on Online Children's Privacy State Legislation and Litigation

Bill Kramer, VP, MultiState

Mr. Kramer presented updates on children's privacy measures across the U.S. He provided an overview of current and proposed state legislation, as well as ongoing litigation. Key states discussed were California, Utah, and South Dakota. California and Utah both have comprehensive privacy laws that are currently blocked, citing First Amendment concerns. South Dakota is considering a novel approach, introducing bills that rely on the app store or the device maker to provide age verification.

Presentation: Virginia Consumer Data Protection Act

Delegate Cliff E. Hayes, Jr., Chair, JCOTS

Delegate Hayes, a key proponent of Virginia's Consumer Data Protection Act (CDPA), provided an overview of the Act's development, goals, and influence. Enacted in 2021 and implemented in January 2023, the CDPA empowers Virginia residents with control over their data, including the right to request deletion and accuracy checks. The CDPA has influenced other states, such as Colorado and Connecticut, which have used it as a legislative template. The Act emphasizes protection for minors, prohibits targeted advertising for those under 13, and relies on the Attorney General's office for enforcement.

Presentation: Overview of Bills & Call for Initial Recommendations

Jodi Kuhn, Executive Director

Ms. Kuhn reviewed the five bills in the workplan and the general concerns that have been raised about each. She emphasized that any outstanding questions should be raised promptly in order to vote on recommendations at the next meeting.

Discussion

Delegate Bonita G. Anthony, Subcommittee Chair

The committee discussed inviting experts on First Amendment issues and privacy law for the next meeting to assist with legal interpretations of the bills. The subcommittee identified the need for clear definitions for terms such as "opt-in," "opt-out," "addictive feeds," "age verification," and "private right of action", noting that consistent definitions are essential for drafting effective legislation. Members also raised questions about the potential for interstate

compacts or federal preemption, especially regarding online privacy, cookies, and data protection standards.

Several members suggested inviting a representative from the Attorney General's office to provide insights on enforcement challenges and support capabilities.

Meeting #4 - October 24, 2024

Note: There was not an in-person quorum at this meeting. Therefore, voting took place again on November 6th.

Follow-up from October 9th meeting

Jodi Kuhn, JCOTS Executive Director

Ms. Kuhn addressed questions that were raised during the last meeting that needed further investigation. This process included communication with the Attorney General's office, research on state litigation, and clarification referencing federal regulation in the bills being reviewed. The answers to these questions were compiled into a document that was reviewed during the meeting.

Bill Recommendations

Delegate Bonita G. Anthony, Subcommittee Chair

Delegate Anthony presented each of the bills on the workplan along with considerations for changes. The two bills recommended to be voted on by the full Commission are:

SB 252 - Consumer Data Protection Act; controller privacy notice, consumer consent. ("Cookie" opt-out) and SB 359 - Consumer Data Protection Act; social media platforms; addictive feed.

Meeting #5 – November 6, 2024

Due to quorum not being met at the October 24th meeting, voting took place again at this meeting. The outcome of the vote was the same, two bills moved to the full Commission: SB 252 and SB 359. Both bills included recommendations for consideration.

Appendix I

Blockchain Advisory Committee - Motion

The topic of blockchain is complex and merits further analysis and consideration in order to develop substantial recommendations for adoption by the Joint Commission on Technology and Science.

Therefore, I move that the subcommittee on blockchain recommend to the full Joint Commission on Technology and Science the creation of an advisory committee pursuant to the authority provided in § 30-88 to advise JCOTS on the topics of blockchain technology, digital asset mining, and cryptocurrency. I further move that such recommendation include that JCOTS request the Chair of JCOTS to appoint the following appointees to serve as the membership of such advisory committee:

- (i) Senator Saddam Azlan Salim, to serve as chair of the advisory committee;
- (ii) two other members of the Senate, at least one of whom shall be a current member of JCOTS;
- (iii) four members of the House of Delegates, at least three of whom shall be current members of JCOTS;
- (iv) a representative from an institution of higher education with expertise in blockchain technology;
- (v) a representative from local government, who shall be selected in consultation with the Virginia Municipal League and Virginia Association of Counties;
- (vi) a representative from a Virginia technology nonprofit organization;
- (vii) an industry expert in blockchain technology;
- (viii) a representative of the Virginia Bankers Association;
- (ix) a representative from a blockchain consumer group; and
- (x) a representative from the Virginia Credit Union League.

Appendix II

JCOTS Core Values

The establishment of Core Values provides consistency in decision making, fosters public trust and accountability, and serves as a benchmark for success. On November 6, 2024, JCOTS voted unanimously to accept the following Core Values:

Innovation

JCOTS strives to foster a culture of creativity and encourages the development of cutting-edge solutions to challenges facing the Commonwealth.

Collaboration

JCOTS promotes collaboration among government, industry, academia, and the public to ensure a comprehensive approach to technology policy.

Ethical Stewardship

JCOTS prioritizes responsible innovation that is aligned with ethical principles; safeguarding privacy, security, and societal well-being.

Public Service

JCOTS ensures that technology and science are used to improve the lives of all Virginians and advance the public good.

Guiding Principles of JCOTS Staff

The following principles were presented to JCOTS on November 6, 2020.

Inclusivity

JCOTS staff value diverse perspectives and work to ensure that everyone has a voice. This means special efforts must be made for historically marginalized/underrepresented groups have an opportunity to participate in the development and evaluation of technology and science legislation.

Transparency

JCOTS staff are committed to open, transparent governance and decision-making, fostering trust and accountability in the development and implementation of research and recommendations.

Timeliness

JCOTS staff respond quickly and efficiently to provide timely reports and recommendations that keep pace with the rapid evolution of technology.

Objectivity

JCOTS staff are committed to making decisions and formulating policies based on facts, evidence, and impartial analysis. JCOTS staff approach issues without bias, ensuring that their recommendations are grounded in research.

Core Responsibilities of JCOTS Staff

1. Provide strategic leadership to the Commission

- Consult with appropriate entities, public or private, on matters related to technology and science under JCOTS' consideration;
- Coordinate its efforts with and assist the efforts of other agencies, authorities, and institutions of the Commonwealth;
- Encourage research and development in technology and science;
- Solicit input from appropriate entities, public or private, on issues related to technology and science;
- Accept private or public funds to carry out its purposes.

2. Conduct research on relevant topics

- Evaluate the impact of existing statutes and proposed legislation related to technology and science in the Commonwealth;
- Investigate, research, and consider such issues related to technology and science as may be requested by the General Assembly or determined by JCOTS.

3. Formulate and present recommendations

- Advise the General Assembly, Governor, and agencies, authorities, and institutions of the Commonwealth upon matters related to technology and science;
- Make recommendations to the General Assembly and the Governor;
- Annually report its findings and recommendations to the General Assembly and the Governor.