

Hearing — Public hearing on Blockchain Technology and its Impact on Government Operations held jointly with Senate Communications and Technology Committee.

Thank you for inviting me to speak today about blockchain technology. My name is William Price and I have been a Pennsylvania resident and taxpayer my entire adult life.

I greatly appreciate the invitation to speak today. Representative Ortity graciously gave me some time recently to discuss this topic and it is wonderful to see a Representative take action after a brief discussion on a topic that is certainly considered “cutting edge”.

My interest in blockchain technology began about a year ago. I am a partner at the international law firm, Clark Hill. I have practiced law in the Commonwealth since 2003 and I focus my practice in the area of debtor/creditor rights. For the last ten years, I have been lucky enough to serve as an adjunct professor at the University of Pittsburgh School of Law teaching the course “Secured Transactions”. Prior to my career in the legal industry, I was a programmer at United States Steel Corporation, where I learned several computer languages, database management and mainframe technologies. My prior career in information technology has certainly influenced my curiosity in blockchain technology and how it can be applied going forward in our Commonwealth.

I present these comments today in my individual capacity. Nothing in my comments today should be viewed with an endorsement by Clark Hill or the University of Pittsburgh. I provide my professional background to merely provide context to my comments.

Secured Transactions is largely an overview of Article 9 of the Uniform Commercial Code. The Secretary of the Commonwealth administers the UCC filing system to provide inquiry notice to third parties of a debtor/creditor secured transaction that serves as a method of perfection for numerous forms of collateral (the “UCC Filing System”). The UCC Filing System is, in my opinion, one system that is worthy of consideration by the Commonwealth for conversion to blockchain technology. Other systems, by way of example, are vehicle registration, corporate registration, EZ Pass or any other large scale database maintained and operated by the Commonwealth. I will generally speak to the UCC Filing System as an example due to my personal experience and utilization of the system. To my knowledge, Pennsylvania would be one of the first states to investigate, adopt and implement blockchain technology for large scale governmental systems in the United States.

I am not here today to discuss cryptocurrency, system development and integration or numerous other aspects that will require significant investigation and testing by the Commonwealth of any system that utilizes blockchain technology. I am able to provide my understanding of the UCC Filing System, discuss high level mechanics and benefits of blockchain technology as an alternative for the UCC Filing System and my personal

experience and observations of the blockchain I have become most familiar with over the last year — Algorand.

At the conclusion of my statement, I have provided links to three publications that specifically discuss blockchain technology and the UCC Filing System. I hope you have an opportunity to review these articles to give you a broader understanding of blockchain technology and how it can be utilized to enhance and improve existing systems — like the UCC Filing System. I am personally intrigued by the prospect of smart contracts being utilized to ensure timely renewals, ease of public review, efficiency for filers to review pending filings and the virtues of the blockchain (i.e. low cost, speed, transparency and carbon negative operation) being realized by the Commonwealth.

As I mentioned, I have spent the last year familiarizing myself with one blockchain in particular — Algorand. Algorand is considered a “layer 1” blockchain technology platform. For a basic understanding of blockchain “layers”, please review this link from the Blockchain Council — <https://www.blockchain-council.org/blockchain/blockchain-layer-1-vs-layer-2/>.

Algorand was founded by a noteworthy professor at the Massachusetts Institute of Technology and Turing Award winner Silvio Micali. Algorand boasts a “pure proof of stake” platform that is secure, scalable, efficient and carbon negative. Algorand hosts both fungible and non-fungible assets on its blockchain. Algorand’s robust technological platform is summarized here — <https://www.algorand.com/technology>. I have personally purchased both fungible and non-fungible tokens (“NFTs”) on the Algorand blockchain.

Various parties have created environments on Algorand leveraging its blockchain technology, including sovereign nations. A few examples include —

1. El Salvadoran Bitcoin currency runs on Algorand blockchain — <https://www.algorand.com/resources/ecosystem-announcements/el-salvador-signs-agreement-with-koibanx-to-develop-its-blockchain-infrastructure-on-algorand>
2. Nigerian intellectual property records — <https://www.prnewswire.com/in/news-releases/nigeria-to-launch-major-crypto-initiative-ip-exchange-marketplace-and-wallet-on-algorand-in-partnership-with-developing-africa-group-and-koibanx-884861060.html>
3. Italian olive oil consortium — <https://www.algorand.com/resources/ecosystem-announcements/italia-olivicola-leverages-algorand-to-improve-supply-chain-transparency-and-efficiency>

The above utilizations highlight the ability of governmental entities to realize the benefits of blockchain technology’s speed, efficiency, transparency and carbon negative nature (in the instance of Algorand). In my opinion, Pennsylvania should strongly consider

adoption of blockchain technology for the UCC Filing System and other large-scale systems.

The blockchain technology and development upon it evolves daily. I have learned a lot about projects on Algorand that are developing on the layer 1 chain. One project, Octorand, has created transformable NFTs with countdown timers, stored currency with smart contracts in a fully transparent "on chain" environment. Another project, Lofty, has created a mechanism to record fractionalized real estate ownership.

The opportunities are significant with technology that stores data, including images, that can serve as a permanent recordation of UCCs, deeds, mortgages, vehicle titles and other documents in an ecologically friendly manner.

I recognize this process can and should be a methodical one by the Commonwealth. I applaud this legislature for calling this hearing to begin the process to explore the potential benefits from blockchain technology.

Kindly review the links below at your convenience for more detailed information about blockchain technology and how it relates to the UCC Filing System. I'm happy to answer any questions. Thank you for your time.

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"Smart Contracts: Is the Law Ready?" Chamber of Digital Commerce, 2018

<https://digitalchamber.org/smart-contracts-whitepaper/>

"Creating Cryptolaw for the Uniform Commercial Code", Washington & Lee Law Review, 2021, Vol. 78, Issue 4, Carla Reyes —

<https://scholarlycommons.law.wlu.edu/cgi/viewcontent.cgi?article=4745&context=wlulr>

"Blockchain and the Future of Secured Transactions Law", 2020, Stanford Journal of Blockchain Technology, Heather Hughes.

<https://stanford-jblp.pubpub.org/pub/blockchain-secured-transactions/release/1>