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Chairman Wilson, Vice-Chair Hottinger, Ranking Member Maharath and members of the Senate Financial Institutions and Technology Committee, my name is Brian Ray. I am the Leon M. and Gloria Plevin Professor of law at Cleveland-Marshall College of Law where I direct the Center for Cybersecurity & Privacy Protection. I also have served on the CyberOhio Advisory Board since it was created in 2016 and on the Ohio Attorney General's Facial Recognition Task Force.

Thank you for inviting me to testify in support of House Bill 177. Ohio has the potential to become a hub for talent, research, and applications in blockchain and related technology growth areas. Cleveland State University (CSU) in partnership with Case Western Reserve (CWRU) and the Cleveland Foundation have been working to realize this vision as part of the Internet of Things Collaborative. The IOTC is an interdisciplinary research and policy group with faculty and staff from both institutions focused on emerging technologies, including blockchain. I am an active participant in the IOTC and other efforts, but today I am testifying in my personal capacity based on the work I have done researching blockchain-related legal and regulatory developments.

From 2017-2020, I had the privilege of serving co-lead of the Blockland initiative's legislation sub-group. We were a small group of volunteer attorneys and attorney-technologists with expertise in blockchain technology focused on identifying legal and regulatory challenges to the adoption of blockchain technology by the private sector and government and developing legislation and policy proposals to remove those roadblocks.

The two distinctive features of blockchain technology are: (1) a distributed network and (2) a shared ledger of transactions. Put together these features create a smart, tamper-resistant way to transfer assets, record transactions and share information. The transparency through decentralization created by blockchain-based solutions allows parties who have access to this shared ledger to see and verify data directly without relying on a third party.

In the context of government services these features allow for much more efficient and reliable verification of key government records that are critical in multiple contexts, including land registries, vehicle registries, business licenses, birth and death certificates, and proof of insurance, among others. The World Economic Forum recently published a study of blockchain's potential benefits for government services concluding that it "presents valuable qualities,

particularly related to tamper-evident and permanent databases and record-keeping, that could enhance transparency, accountability, and citizen engagement."[1]

Blockchain applications also have the potential to streamline processes, reduce redundancies, increase security, and ensure data integrity. One prominent example is the General Services Agency (GSA) FASTLane process. GSA uses this system to manage incoming proposals from vendors and it currently takes around 40 days to process those proposals, even under this expedited system. A GSA official recently hypothesized that a blockchain-based solution could reduce that time to less than 10 days and lower the direct costs of analyzing vendor proposals by up to 80 percent.[2]

Blockchain has enormous potential for innovation and economic growth. Ohio is home to two leading-edge companies that already are deploying real-world solutions for government. Cleveland-based Champ Titles worked closely with InnovateOhio and the Bureau of Motor Vehicles to create one of the first blockchain-based vehicle titling systems. This system digitizes the process of vehicle titling to create a legal, digital title that is far more secure, auditable and easily transferable than traditional paper titles.

Cincinnatti-based software startup 10XTS is using blockchain and distributed ledger technologies to help drive the next generation of regulatory compliant financial services data management. Its signature product, XDEX, is a blockchain-based protocol network and API-based application ecosystem for storing, securing managing, sharing and governing financial information and records.

In 2018 Ohio took the first step towards enabling the private sector to tap into that tremendous potential with the passage of its first blockchain-related law recognizing blockchain-secured contracts. House Bill 177 takes the next significant step by permitting Ohio's governmental entities to become active partners in that effort both through modernizing public services and by creating the infrastructure for public-private collaborations using the technology.

We are still in the very early stages of understanding how blockchain technology can transform government services, and most governments are just beginning to experiment with the technology. Blockchain is not a panacea and determining how best to deploy the technology will require careful analysis and a deep understanding of the technology's strengths and weaknesses. HB 177 will allow Ohio to join the other visionary states who are experimenting with this transformative technology.

Thank you for the opportunity to testify in support of this important piece of legislation.

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[1] World Economic Forum, "Blockchain alone can't prevent crime, but these 5 use cases can help tackle government corruption," July, 13, 2020.
[2] Phil Goldstein, "Treasury, GSA See the Benefits of Blockchain," FedTech (2018).