

**UNITED STATES SENATE COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION**

On

“Securing U.S. Leadership in Emerging Computer Technologies.”

Applications of Digital Ledger Technology and How the US Can Better Compete

Dir. Steven C. Lupien

University of Wyoming Center for Blockchain and Digital Innovation

September 29, 2022

Chairman Cantwell, Ranking Member Wicker and members of the committee, thank you for the opportunity to testify today on the topic of Distributed Ledger Systems and how the U.S. can gain and then maintain our leadership in this nascent technology. My name is Steven Lupien, and I am a Lecturer in Digital Assets at the University of Wyoming’s College of Business and Director of the University’s interdisciplinary Center for Blockchain and Digital Innovation (CBDI).

I am an expert in the many ways that digital assets are disrupting business and financial systems and the co-author of the textbook *Blockchain Fundamentals for Web 3.0* published in August 2022 by the University of Arkansas Press: [Link](#)

In my educational capacity, I am often asked to explain what blockchain are. Simply put, they are a new type of database that allows multiple people to see the same information at the same time and provide trust that the information is valid. Blockchains make data unique, and

that is their true power. Data on a blockchain is immutable, encrypted yet private, and allows trust to be written in code, and not left to third-party intermediaries.

I have been directly involved in much of the forward-looking regulation that Wyoming has enacted, currently 30 Bills since 2017, that include:

- The first Token Taxonomy bill defining digital assets under the law,
- Mapping digital assets to existing UCC Law,
- Creating a Fintech Sandbox to allow businesses to innovate under regulatory supervision, and
- The ground-breaking Special Purpose Depository Institutions (SPDI) bill creating regulated banks for both U.S. dollar deposits and digital assets.

Unlike many in this space, I believe that digital assets should be allowed to flourish under appropriate regulatory guardrails while allowing the latitude for experimentation, development, and growth. I don't see digital assets as a threat to our existing financial and business systems, but instead as enhancements that will allow the U.S. to maintain our lead in finance and business, and as the world's reserve currency long into the future.

However, the industry is receiving mixed signals from regulators to date, and we need to align on a comprehensive regulatory framework that removes any uncertainty and allows businesses the legal clarity that they need to experiment and grow this technology.

Digital assets encompass much more than just "cryptocurrency," they are being used for highly efficient supply train tracking, frictionless and speedy payment systems, smart contracts that allow businesses to automate countless contractual agreements, and the tokenization of physical assets through non-fungible tokens (NFT's) – that not only allow the tokenization of intellectual property, like artwork, but also innovations such as ESG tokens for Energy Source Identification, Carbon Capture, Carbon Sequestration, and even environmental habitat protection, to name just a few.

The U.S. government has been slow to fund research projects in this space, and I encourage you to explore opportunities to partner with universities in discovering how digital assets can bring about financial and business leadership as well as public good -- please consider the role of rural universities in this space, we are often out in front. For example, the University of Wyoming was the first D-1 university to offer a degree program in blockchain (Minor in Blockchain), the first to build and operate an education Bitcoin mining lab, and the first to operate a proof-of stake staking pool.

I am also a very strong advocate of fostering digital literacy. My center recently received funding through the Wyoming Innovation Partnership (WIP) with seed funding from the American Rescue Plan (ARP) to develop education programs for Wyoming's high schools and community colleges. The goal of these program is to introduce students to the many options available to them in STEM in general and blockchain in particular. We have a secondary goal of

introducing girls and women to these opportunities as they are presently underrepresented in the workforce. I encourage you to look at how programs such as these can be made available nationwide.

The US Department of Commerce published a report this month titled, RESPONSIBLE ADVANCEMENT OF U.S. COMPETITIVENESS IN DIGITAL ASSETS. In this report, they highlighted several categories that I support, and ask that you do also, including:

- Ensuring effective regulatory approaches and addressing regulatory gaps. This will support the development of a healthy market that nurtures competition and responsible innovation while safeguarding consumer and investor interests, market integrity, financial stability, and national security.
- Fostering meaningful public-private engagement to ensure that digital asset stakeholders across multiple business sectors and Federal departments and agencies can regularly meet to discuss issues of import to the digital asset sector and identify areas where coordination may need to occur. Please include rural universities here, as well.
- Sustained leadership in technological research and development (R&D) that will be advanced through activities such as increased investment in government, academic, and industry-led research, workforce development, and digital literacy.

I thank you all for your time and consideration and welcome any questions you have.