



November 6, 2023

VIA Federal eRulemaking Portal

National Institute of Standards and Technology
100 Bureau Drive
Gaithersburg, MD 20899-8970

**Re: Implementation of the United States Government National Standards Strategy for
Critical and Emerging Technology Request for Information**

To Whom It May Concern:

Blockchain Association (the “Association”) submits this letter in response to the request for information by the National Institute of Standards and Technology (the “Institute”) on the implementation of the United States Government (“USG”) National Standards Strategy for Critical and Emerging Technology (“NSSCET”).

The Association is the leading nonprofit membership organization dedicated to promoting a pro-innovation policy environment for blockchain technology and the digital asset economy. The Association endeavors to achieve regulatory clarity and to educate policymakers, regulators, courts, and the public about how blockchain technology can pave the way for a more secure, competitive, and consumer-friendly digital marketplace. The Association represents over 110 member companies reflecting the wide range of the dynamic blockchain industry, including software developers, infrastructure providers, exchanges, custodians, investors, and others supporting the public blockchain ecosystem.

This letter serves to discuss the importance of industry participation in the standards developments for distributed ledger technologies (“DLT”) and digital identity infrastructure, specifically for blockchain technology and digital assets. This letter also seeks to highlight the Association's broad representation of industry stakeholders involved in blockchain technology and digital identity technologies and express our support for the Institute and standards developing organizations (“SDO”) in developing and implementing the NSSCET.

The Association echoes the Institute’s recognition of the importance of industry participation in standards development activities to ensure that critical and emerging technology (“CET”) standards would encourage market and regulatory acceptance and provide this nascent and evolving industry with a baseline for best practices. The Association appreciates the Institute’s commitment to engaging with stakeholders and welcomes continued conversation.

I. Introduction

As an initial matter, the Association seeks to represent the value and uniqueness of blockchain technology, a subset of DLT, in modernizing today's digital world. Of its many applications, public blockchains revolutionize digital identity and enable privacy in ways that both protect individuals and relieve traditional digital identity infrastructures of costly burdens.

Considering that this technology is nascent and continuing to evolve, standards development activities for blockchain technology and blockchain-powered digital identity solutions are a national interest that is crucial to ensuring the integrity of the ecosystem and providing innovators with a reference for best practices. By connecting private sector expertise, such as that of our members, with the Institute and other SDOs through the NSSCET, standards development for blockchains and blockchain-powered digital identity solutions would allow policymakers and regulators to better understand the industry. Standards development activities, as envisioned by the NSSCET, would also act as an arena for collaboration between private sector stakeholders, policymakers, and regulators to produce novel solutions that bridge the gaps between technology, laws, and regulations. This can apply to cybersecurity best practices and the formulation of standards for open-source software development.

Following the questions published in the Institute's request for information, we recognize several objectives as key priorities for the implementation plan for the NSSCET, including the importance of U.S. participation, investment, and private-sector participation in standards development activities for blockchain technology. In developing an effective implementation plan for the NSSCET for distributed ledger technologies and digital identity infrastructure, the Association sees a variety of avenues where our resources and network can support NSSCET to achieve these objectives. As the leading industry association that represents many of the developers, investors, and other stakeholders on the front lines of blockchain innovation, the Association wishes to explore how we can be most helpful in guiding blockchain industry participation in the development of the NSSCET.

II. The Importance of Standards Development Activities for Blockchain Technology

The Association wishes to illustrate the revolutionary value and uniqueness of public blockchains, a subset of DLT, and their applications in modernizing today's digital ecosystem. Public blockchains, based on decentralized technology, provide trust through transparent code and forced accountability, eliminating the need for intermediaries. The use of blockchain technology to produce novel tools or decentralized iterations of traditional technologies provides utility to everyday users as well as public and private sector entities, whether in its application to software development, data architectures, financial services, or gaming. This technology is separated from a large majority of CETs: rather than rely on intermediaries as service providers, blockchains rely on a dispersed, unaffiliated group of participants to add, verify, and digitally store information in a transparent, immutable, and secure manner.

An application of blockchain technology that is garnering more attention is its use in digital identity technologies. Traditional digital identity infrastructures use centralized data management systems or rely on third-party vendors to maintain personally identifiable information (“PII”), practices that allow for a single point of vulnerability or introduce intermediary risks to sensitive data. Alternatively, many blockchain-powered solutions utilize public blockchains to register and verify digital identities, effectively providing a privacy-enabling, secure approach to storing and transmitting sensitive data. Where data privacy concerns and cybersecurity risks have plagued the digital era,¹ ZK-integrated,² blockchain-powered digital identity solutions would allow users to securely prove their identity or other sensitive information to a verifier without revealing unnecessary personally identifiable information. Other than acting as a revolutionary privacy-enabling technology for users, these digital identity solutions could relieve private sector organizations of many of the risks of maintaining sensitive user information. Moreover, integration of these digital identity solutions could eliminate many of the burdens associated with building costly data management systems and intricate risk mitigation controls.

Despite the immense value and potential of blockchain technology and its applications, this space has yet to see regulatory clarity and consensus-based standards materialize. As a nascent and evolving technology that is witnessing increased adoption, standards development activities for blockchain technology, especially that guided by the NSSCET, would enhance innovation and preserve technological integrity by bringing benefits to the broader blockchain industry. Although blockchains inherently address many cybersecurity, data privacy, and intermediary risks that are prevalent in other technologies, standards for blockchain development are still critical to the future of the industry. Such standards would provide blockchain developers with benchmarks to assess the cybersecurity of their innovations, amongst other best practices such as using blockchain technologies to ensure content authentication and provenance. They would also provide traditional technologies with a framework to securely integrate blockchain technology into their systems. Users of blockchain-powered platforms would also be equipped with increased confidence when using products and services that are in line with private sector-led standards endorsed by the USG. By encouraging SDOs to collaborate with private sector stakeholders of blockchain technology, existing cybersecurity standards frameworks can be considered and updated to best serve the cybersecurity needs of the industry.

As policymakers identify national policy priorities and regulators propose rules to create an environment of compliance around the industry, private sector-led standards development

¹ See generally Omar Ali et al., *A Comparative Study: Blockchain Technology Utilization Benefits, Challenges and Functionalities*, Institute of Electrical and Electronics Engineers. (January 8, 2021), <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9317729>.

² A ZK proof is a cryptographic method by which one party (the “prover”) can prove to another party (the “verifier”) that a given statement is true without the prover conveying any additional information apart from the fact that the statement is indeed true. ZK proofs are mechanisms that largely allow for many blockchain-powered digital identity solutions.

activities for blockchain technology would also enrich legislative and regulatory perspectives. Standards for blockchain development would provide regulators with a better understanding of the technology and what kinds of solutions are technologically feasible and help them propose rules that are more compatible with the ethos of decentralization. Such standards could also act as the baseline for security controls and control implementation that regulators could use to monitor and assess cybersecurity compliance. Standards development activities for blockchains would also provide policymakers with an understanding of how the industry's best practices are in line with national policy priorities, as expressed in legislation and other statements of policy. Standards development activities would create a forum for collaboration between private sector stakeholders, policymakers, and regulators to align on technical solutions that would reconcile the practices of the blockchain industry with legislative and regulatory priorities.³

III. The Association Seeks to Support the Development of the NSSCET Implementation Plan

The Association is pleased to see the extent to which the Institute and USG seek to involve private sector involvement in the development of the NSSCET implementation plan. We are also encouraged by the USG's support of an international standards system for DLT, especially considering that blockchains themselves are a borderless technology that will require coherent standards across jurisdictions. Recognizing the nascent and evolving nature of blockchain technology, industry participation in standards development is key to ensuring that the standards developed through the NSSCET will consider the potential evolution of blockchain technology and increased blockchain integrations in other CETs.

As the leading nonprofit membership organization for the blockchain industry, the Association represents a wide range of perspectives from software developers, infrastructure providers, exchanges, custodians, investors, and others supporting the public blockchain ecosystem. Many of these members are led by innovators who have implicitly created industry best practices through their years of open-source development. Additionally, the membership of the Association has diverse opinions and perspectives: some members are industry-leading institutions that create markets and facilitate access to this growing ecosystem and other members are startups on the bleeding edge of the technology's development. The invaluable diversity of our membership provides us with a comprehensive perspective that allows us to better serve the industry and assist the Institute.

As the Institute begins to develop the NSSCET implementation plan, we invite the Institute to leverage this diversity and encourage any forms of collaboration that we can accommodate.

³ As an example, ZK-integrated, blockchain powered digital identity solutions would provide the participants of the blockchain ecosystem with a mechanism to verify identity in line with Know Your Customer standards while preserving individuals' privacy and the unique benefits of decentralization. Private sector-led standards for these solutions would be impactful in providing regulators with the confidence to endorse such standards and create an environment of greater compliance.

The Association would be pleased to solicit input and feedback in industry-specific and issue-specific forums where our members can openly discuss topics to better inform NSSCET's implementation plan and objectives.

In line with the questions of the Institute's request for information, the Association would like to provide areas where our resources and members can be particularly helpful in the development of the implementation plan for the NSSCET.

1. Importance of U.S. Participation in Standards Development Activities

Blockchain technology is not only critical and emerging, it is also strategic: blockchains stand on the frontier for global technology competition. U.S. leadership in standards development activities is important for providing a landscape for blockchain innovators to operate within the jurisdiction of the United States and its allies. Decreased U.S. participation in standards development activities would see blockchain developers and their projects, which are inherently open-source, shift to jurisdictions that may not reflect the principles that are fundamental to the principles of the NSSCET. U.S. leadership in standards development activities would help ensure that the development of blockchain technologies⁴ and the measures taken to combat its illicit uses⁵ continue to serve our national interest. The Association urges the Institute to put our network of American innovators to use and connect with our members as it continues to develop plans for this objective.

2. Guiding Investment in Standards Development Activities

The Association wishes to note that a variety of policy pathways would allow Federal spending on research and development to drive technical contributions for standards development activities for blockchain technology, namely those that follow formats similar to public-private partnerships. An example worth considering is the creation of a U.S. regulatory sandbox for blockchain technology in which industry participants of all sizes would be able to make technical contributions to standards development activities. Considering that many of our members are the stakeholders who have been defining industry best practices through their innovations thus far, they would be able to assist in the development of this program, by providing insights on resource allocation and private-sector input on potential program priorities,

⁴ Stablecoins are digital assets that maintain a stable value compared to a reference asset, typically the U.S. dollar. The widespread use of dollar-backed stablecoins in digital asset markets protects the dollar's dominance in the digital era, further solidifying the dollar's position as the global reserve currency.

⁵ As with all technologies, bad actors can use good technology for illicit uses. Standards development activities for blockchain technologies and digital identity infrastructure that are in line with core American values would help protect the blockchain ecosystem and all of its participants by defining best practices for illicit activity monitoring. As stated above, see *supra* at 4 and n. 2, ZK-integrated, blockchain-powered digital identity solutions would be areas of mutual interest where developers, regulators, law enforcement, and SDOs can collaborate to develop regulatory technical solutions.

and would be fitting participants for such a program. The Association is happy to help conceptualize similar initiatives where the private sector and public sector can collaborate.

3. Fostering Private-sector Participation in Standards Development Activities

As mentioned above, the Association encourages the Institute to consider collaborations between our members and SDOs. We believe that organizing these collaborations earlier in the life of the NSSCET would be more advantageous, considering industry stakeholders, such as our members, could effectively identify standards development activity priorities and assist in the development of standards that would encourage market and regulatory acceptance. We also stand ready to work with the Institute and any relevant SDOs to address potential participation gaps in standards development activities for blockchain technology and digital identity infrastructures. The Association is ready to act as an intermediary between its membership and SDOs for improved communications, and we hope that the Institute considers encouraging SDOs to view our organization as a representation of the blockchain and digital asset industry.

IV. Conclusion

We greatly appreciate the Institute's request for information on standards development activities. It is clear that the Institute recognizes the importance of blockchain technology and digital identity infrastructures, and we agree that standards development activities for these CETs are a national interest. Should the Institute wish to discuss any of the opportunities raised in this letter ahead of the implementation of the NSSCET or any other issues related to blockchain technology or digital identity infrastructure, the Association remains willing and eager to participate. Thank you for your consideration.

Respectfully submitted,

A handwritten signature in cursive script that reads "Smilby".

Sarah Milby
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