December 09, 2024

The Honorable Dr. Laurie Locascio
Director
National Institute of Standards and Technology
100 Bureau Drive
Gaithersburg, Maryland 20899

Re: Response of ACT | The App Association on Request for Comments on the Implementation Roadmap for the United States Government National Standards Strategy for Critical and Emerging Technologies (USG NSSCET)

Dear Director Locascio:

ACT | The App Association (the App Association) appreciates the opportunity to provide comments to the National Institute of Standards and Technology (NIST) request for feedback on the Implementation Roadmap for the United States Government National Standards Strategy for Critical and Emerging Technologies (USG NSSCET).[1]

I.   Statement of Interest

The App Association is a policy trade association for the small business technology developer community. Our members are entrepreneurs, innovators, and independent developers within the global app ecosystem that engage with verticals across every industry. We work with and for our members to promote a policy environment that rewards and inspires innovation while providing resources that help them raise capital, create jobs, and continue to build incredible technology. The small businesses and startups we represent both participate and seek to participate in the international standard setting process to contribute and build on important technical standards. App Association members are active in new platforms, like Web3, develop using indispensable technologies (i.e., artificial intelligence [AI]), and innovate on top of technical standards. The value of the ecosystem the App Association represents—which we call the app economy—is approximately $1.8 trillion and is responsible for 6.1 million American jobs, while serving as a key driver of the $8 trillion internet of things (IoT) revolution.[2] As lead innovators in critical and emerging technologies (CET), small businesses must be a part of this conversation.

II.   App Association Feedback to the USG NSSCET

We appreciate the opportunity to provide feedback on the draft Implementation Roadmap for the USG NSSCET. The App Association provided detailed comments to NIST on December 22,

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[1] National Institute of Standards and Technology, U.S. Government National Standards Strategy for Critical and Emerging Technology (July 2024), https://www.whitehouse.gov/wp-content/uploads/2024/07/USG-NSSCET_Implementation_Rdmap_v7_23.pdf.
[2] The App Association, State of the U.S. App Economy 2020, 7th Ed., https://actonline.org/wp-content/uploads/APP-Economy-Report-FINAL-1.pdf.

2023, regarding the implementation of the USG NSSCET.[3] In addition, after reviewing the draft Implementation Roadmap, on July 12, 2024, we highlighted several key areas of concern and suggested actionable improvements.[4]

We offer the following further input on the updated USG NSSCET Implementation Roadmap.

a. *Existing Awards and Recognition Programs for Standards Development*

Awards and recognition programs are vital tools for incenting participation and leadership in standards development. The U.S. government has a strong foundation to build on, including programs like the ANSI Leadership and Service Awards,[5] NIST's Edward Bennett Rosa Award, and the Samuel J. Heyman Service to America Medals.[6] Expanding these programs to specifically address contributions to CET standardization would amplify their effect In addition to enhancing existing programs, new awards could target gaps in recognition. These could include emerging CET Leader Awards for young professionals and small and medium-sized businesses (SMBs). We encourage providing financial rewards to increase interest and impact. Such programs would ensure that participants across all career stages and organization sizes feel encouraged to engage in CET standards development.

b. *Best Practices for Standards Workforce Development*

Workforce development is critical to sustaining engagement in standards development, particularly in emerging technologies. The roadmap should prioritize mentorship programs that connect early-career professionals with experienced leaders in CET standards. Offering financial support for travel and training programs would further reduce barriers to participation. Educational outreach to decision-makers is equally important. Initiatives like ANSI's "Standards Boosts Business" campaign provide a useful model for communicating the value of standards to executives.[7] Presenting at major industry events and trade associations would broaden this reach and illustrate how standards engagement drives business success.

Collaboration with academic institutions is also essential. Embedding standards education into science, technology, engineering, and math (STEM) curricula would create a pipeline of future contributors. Building on the success of the NIST Standards Coordination Office Curricula Development Cooperative Agreement Program,[8] NIST should seek ways to reinvigorate this program and generally support standards education into university curricula. Further, government-funded grants could support faculty research into CET standards pedagogy, while scholarships and reduced-cost memberships would make standards organizations more accessible to students and emerging professionals.

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[3] *See* https://www.regulations.gov/comment/NIST-2023-0005-0106.
[4] The App Association, Response of ACT | The App Association on Request for Comments on the Draft Implementation Roadmap for the United States Government National Standards Strategy for Critical and Emerging Technology (USG NSSCET) (July 12, 2024).
[5] https://www.ansi.org/events/standards-events/awards.
[6] https://servicetoamericamedals.org/.
[7] https://www.ansi.org/Impact-of-Standards/standards-boost-business.
[8] https://www.nist.gov/standardsgov/nist-standards-coordination-office-curricula-development-cooperative-agreement-program.

c. *Open Feedback on the Implementation of the USG NSSCET*

The updated Implementation Roadmap reflects progress in several areas, but the App Association has continued concerns identified in earlier feedback that remain partially addressed or unaddressed:

Clarity on Private-Sector Leadership

The roadmap acknowledges the private sector's importance but does not sufficiently emphasize its leadership role. The U.S. standards system is rooted in a private-sector-led, consensus-driven model, and government actions should amplify this leadership rather than direct it. While support for SMBs is included, the overall emphasis on government-driven initiatives risks overshadowing private-sector contributions. For example, grants and reduced barriers for SMBs reflect some alignment with private-sector needs. The roadmap should explicitly affirm the private sector as the leader in CET standards development. Government efforts should be clearly framed as enabling and supporting private-sector priorities.

Pre-Standardization Activities

Pre-standardization research is valuable but should focus on identified gaps in public-private collaboration. The roadmap includes important mechanisms for identifying gaps in public-private collaboration but retains broad goals for government-led pre-standardization research and development (R&D). This risks duplicating or displacing private-sector efforts. The roadmap should narrow the scope of pre-standardization activities to focus on identified collaboration gaps.

Support for SMBs

Efforts to support SMBs are among the most effective aspects of the updated roadmap. Proposals to provide grants for international standards meetings and streamline visa processes for foreign participants reflect thoughtful solutions to common barriers. We recommend that the roadmap expand these initiatives to ensure equitable access for diverse SMBs across CET sectors.

Addressing Standard-Essential Patent (SEP) Licensing Abuse

We continue to be encouraged by NIST's acknowledgment of the fair, reasonable, and non-discriminatory (FRAND) commitment as a vital mechanism used by SDOs to facilitate widespread and efficient licensing between SEP holders and other standards users seeking to take a license.[9] However, the roadmap remains silent on the critical issue of standard-essential patent (SEP) licensing abuse. Practices such as excessive royalties and exclusionary tactics continue to deter CET innovation and participation in standards.

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[9] National Institute of Standards and Technology, U.S. Government National Standards Strategy for Critical and Emerging Technology (July 2024), at 21, https://www.whitehouse.gov/wp-content/uploads/2024/07/USG-NSSCET_Implementation_Rdmap_v7_23.pdf.

We provided our detailed position of SEP licensing abuse to a joint agency (ITA-NIST-USPTO) request for comments on the Collaboration Initiative Regarding Standards.[10] We also submitted a multi-organization letter detailing that a successful implementation of the USG NSSCET includes addressing well-known barriers to the use of international standards, including abusive SEP licensing practices carried out by opportunistic SEP holders seeking to maximize licensing profits by pursuing unreasonable and, often, discriminatory, royalty rates from technology developers that need to use the standard.[11] This abuse is carried out by some SEP holders who, despite offering to license their SEPs on FRAND terms in exchange for their patents' inclusion in standards, abuse their inherent market power gained through standardization to demand excessive royalties, threaten market exclusion through injunctions or exclusion orders (prohibitive orders), or otherwise exclude potential licensees, holding up standards-based innovation for important CET markets. Such practices directly undermine the goals of the NSSCET, and further threaten U.S. economic and national security by disrupting key supply chains.

In line with the USG NSSCET's commitment to develop infrastructure to increase inclusivity in standards processes, as well as further steps to provide certainty in fair and open approaches to standards participation, we urge NIST to identify SEP abuse as a critical barrier to standards participation by American companies. NIST should continue to work with the International Trade Administration (ITA) and the United States Patent and Trademark Office (USPTO) to advance policy that provides technology developers, including App Association members, with more transparency and certainty to operate within the standard-setting process, and to use CET standards developed under this system. This effort should directly coordinate with the goals of the USG NSSCET.

Communication and Transparency

The roadmap proposes interagency collaboration platforms but lacks robust mechanisms for private-sector feedback. Public-private communication tools are essential to ensure alignment with industry needs and challenges. NIST should enhance communication between the public and private sectors by establishing a robust platform for regular updates, feedback, and collaboration. This platform should enable the sharing of information on current and upcoming standards activities, government priorities, and opportunities for private sector involvement. Effective communication is essential to ensure all stakeholders are informed and can participate meaningfully. A dedicated platform will provide transparency and foster collaboration, addressing concerns about the generalization of issues and the lack of clear roles and responsibilities.

U.S.-Hosted Standards Meetings

Proposals to facilitate international participation in U.S.-hosted standards meetings are commendable. Streamlined visa processes and financial support for hosting events will strengthen U.S. leadership in global standards. The roadmap underscores the importance of sustained funding for CET R&D and standards development activities, proposing financial support for hosting international standards meetings in the United States, including the potential development of grant programs. This aligns well with our request for a private funding program to facilitate such meetings. Hosting standards

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[10] *See* https://www.regulations.gov/comment/PTO-C-2023-0034-0057.
[11] *See* https://www.regulations.gov/comment/PTO-C-2023-0034-0051.

meetings in the United States enhances accessibility for U.S. stakeholders and promotes U.S. leadership in the standards development process. We recommend that the roadmap build on these efforts by partnering with standards development organizations and industry groups to co-host events and ensure their success.

III. Conclusion

The App Association looks forward to continuing our collaboration with NIST to refine and implement the USG NSSCET. Our recommendations aim to enhance the roadmap by emphasizing private-sector leadership, improving coordination and communication, supporting SMB participation, addressing SEP licensing challenges, and promoting U.S.-hosted standards meetings. We believe these actions will strengthen the U.S. standards system and ensure it remains a driver of innovation and competitiveness.

Sincerely,

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