

Before the
DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, MD 20899

In the Matter of)	
)	
Study on People’s Republic of China (PRC))	Docket No. 211026–0219
Policies and Influence in the Development of)	
International Standards for Emerging)	
Technologies)	

COMMENTS OF THE CONSUMER TECHNOLOGY ASSOCIATION

The Consumer Technology Association (“CTA”)^{®1} appreciates the opportunity to provide input to the National Institute of Standards and Technology (“NIST”) in response to NIST’s Request for Information, *Study on People’s Republic of China (PRC) Policies and Influence in the Development of International Standards for Emerging Technologies* (“RFI”).²

CTA is a champion of voluntary, consensus-based standards, with an extensive Technology and Standards program that includes more than 70 committees, subcommittees and working groups and roughly 1100 participants as well as American National Standards Institute (“ANSI”) accreditation. Industry-led, open and voluntary global standards for communications and information technologies enable the cost-effective introduction of new technologies while helping to drive competition so that standards can move at the speed of innovation, rather than at the speed of (any one country’s) regulation. CTA deeply appreciates NIST’s support for the role

¹ As North America’s largest technology trade association, CTA[®] is the tech sector. Our members are the world’s leading innovators—from startups to global brands—helping support more than 18 million American jobs. CTA owns and produces CES[®]—the most influential tech event on the planet.

² NIST Request for Information on Study on People’s Republic of China (PRC) Policies and Influence in the Development of International Standards for Emerging Technologies, 86 Fed. Reg. 60,801 (Nov. 4, 2021), <https://www.govinfo.gov/content/pkg/FR-2021-11-04/pdf/2021-24090.pdf> (“RFI”).

standards play in technology innovation and American leadership in the global technology marketplace, which, in turn, affects national security and economic competitiveness. CTA and its members actively contribute across the wide range of technology standards activities, and we value ongoing opportunities to collaborate with NIST on related activities as well.

As a general matter, standards driven by technological expertise, rather than government fiat, produce the best outcomes to advance both technology and competition in the long run. Efforts by governments to put a thumb on the scale in favor of national champions can undermine the integrity of these outcomes and threaten to mire technological development in political machinations. The consumer technology industry thus shares U.S. policymakers' concerns about the Chinese government's increasing involvement in technical standards setting, and particularly the Chinese government's declared intention to take a leading role in setting standards to surpass western countries in innovation.³ While these declared intentions have yet to mature into a pattern of undue influence, there is a clear threat, despite the robust governance processes and safeguards implemented by SDOs.

This declared intention, if it matures—when combined with massive subsidization of technology infrastructure in countries across the globe—could negatively impact national

³ See, e.g., National Defense Authorization Act for Fiscal Year 2021, Pub. L. No. 116-283 § 9414, 134 Stat. 4821 (2021) (requiring this study on Chinese policies and influence in the development of international standards for emerging technologies) (“NDAA FY2021”); U.S.-China Economic and Security Review Commission 2018 Report to Congress (Nov. 2018), <https://www.uscc.gov/annual-report/2018-annual-report-congress> (“2018 U.S.-China Economic and Security Review”); Shaun Waterman, *Gary Shapiro Calls 5G “Battleground” Between US and China*, Via Satellite (Nov. 5, 2019), <https://www.satellitetoday.com/innovation/2019/11/05/gary-shapiro-calls-5g-battleground-between-us-and-china/> (quoting CTA President and CEO Gary Shapiro saying, “There is a competitive economic battle going on If we lose, we lose, potentially, those other battles about who we are as a nation and our focus on individual liberty. ... It’s not just about a cool technology, it’s a matter of our national future ... If China wins, their way of life will become the way of life that’s pushed on the world.”).

security and put American companies at a competitive disadvantage.⁴

Accordingly, despite the perils of government intervention in industry standards setting processes in general, the U.S. government should take a larger role in enabling industry to counteract and protect against harms of the Chinese approach. The U.S. can ensure the standards system is supporting U.S. competitiveness by strengthening support for the voluntary, market-driven, consensus-based, open-participation technology/ICT standards system. It is possible to do so without politicizing or otherwise compromising the standards setting process. As NIST conducts the study required by Section 9414 of the FY2021 National Defense Authorization Act, CTA urges NIST to partner with industry to develop a strategy for incentivizing U.S. private sector engagement in international standards. To promote American values globally, the U.S. government should coordinate with industry and like-minded partners—such as free market democracies and multi-national organizations—to promote international standards based on the technical expertise of private sector innovators and champion fair, rules-based standards processes that vigilantly guard against anticompetitive practices. Specifically, the U.S. government should:

- repurpose existing funds to help cover the expenses of standards engagement;
- work with Standards Development Organizations (“SDOs”) to monitor for potential abuses and take steps—potentially including via State Department engagement—to counter anticompetitive practices;
- encourage more domestic participation in international standards by hosting major standards meetings in the United States;
- urgently exempt standards development and promulgation activities from U.S. Export Administration Regulations to prevent chilling effects for industry participation; and
- lower barriers to travel into the U.S. for foreign participants.

⁴ See generally NDAA FY2021 § 9414 (referencing “the stated intentions of the ‘China Standards 2035’ plan”).

Ultimately, the U.S. should lead the world by example and follow the kinds of processes we hope to encourage around the globe. CTA expands on these ideas below and welcomes ongoing engagement with NIST on this important topic.

I. VOLUNTARY, CONSENSUS-BASED STANDARDS PROVIDE A CRITICAL FOUNDATION FOR INTEROPERABILITY AND INNOVATION

For centuries, standards have provided the bedrock of technological development and dissemination, enabling experts from across the globe to put forward their best ideas and test them against the best ideas of their peers. The current voluntary global technology standards process reflects this competitive environment by promoting innovation and flexibility while also providing for interoperability and security.⁵ Standards can help improve system efficiency and outcomes, reduce waste, lower costs and maintain quality control. Technology standards can serve many different purposes, and the different structures, processes and governmental role of SDOs lend themselves to addressing different standardization needs. The nature of government participation should necessarily vary based on the type of standard, and industry should be responsible for signaling when heightened government participation is appropriate. In every case, however, the most useful and impactful standards derive from subject matter expertise.

A. Diverse Types of Standards Contribute to a Rich Ecosystem of Technology Development

As demonstrated by NIST's own documentation and standards guidance, the global technology community benefits from a diverse set of standards processes that each address unique needs in terms of collaboration and interoperability.⁶ The range of technology standards

⁵ See RFI, 86 Fed. Reg. at 60,801 (“Standards are not just useful for solving practical issues of compatibility, but also because they accelerate innovation”).

⁶ See generally NIST, NISTIR 7614, *The ABC's of Standards Activities*, at 4-5 (Aug. 2009), https://www.nist.gov/system/files/nistir_7614.pdf (noting also that these various types of standards together “promote order, efficiency, and fairness in the marketplace, facilitate technological process, and enhance U.S. competitiveness”).

activities can be categorized in many different ways—physical measurement standards versus documentary standards, the ISO/IEC Guide’s eight categories of common standards (terminology, testing, product, process, service, interface, and standards on data to be provided), etc. For purposes of this study and the role that governments should play in the standards-setting process, CTA encourages NIST to consider the distinction between two types of standards bodies: (1) *nation-state-based standards bodies*, such as the International Telecommunication Union Standardization Sector (“ITU-T”),⁷ which are international fora developed by governments and designed for governmental collaboration; and (2) *industry consensus standards bodies*, like CTA and the 3rd Generation Partnership Project (“3GPP”),⁸ which are fora established and run by the private sector to develop tools for industry use in operating products and services, and on which industry experts can innovate to develop new technologies.

Standards work is best when driven by subject matter expertise. In each of these varied standards fora, the best outcomes are achieved by fair and consistent processes that allow subject matter expertise to shine.

Standards bodies use numerous principles—such as consensus, transparency, balance, due process and openness—to ensure a fair, competitive process to facilitate the best technical outcomes.⁹ Standards bodies must steadfastly maintain these international standards principles,

⁷ See ITU-T, About ITU Telecom,, <https://www.itu.int/en/itu telecom/Pages/default.aspx> (last visited Dec. 6, 2021). The ITU-T operates under the International Telecommunications Union (“ITU”), which is the United Nations specialized agency for information and communications technologies. See ITU, About International Telecommunications Union (ITU), <https://www.itu.int/en/about/Pages/default.aspx> (last visited Dec. 6, 2021).

⁸ See 3GPP, About 3GPP, <https://www.3gpp.org/about-3gpp> (last visited Dec. 6, 2021).

⁹ See generally CTA, Technology & Standards Procedures Manual EP-23-T, Jan. 2020, <https://standards.cta.tech/kwspub/rules/CTA-EP-23-T.pdf>; Off. of Mgmt. & Budget, Exec. Off. of the President, OMB Circular No. A-119 Revised, *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*, <https://www.whitehouse.gov/wp-content/uploads/2017/11/Circular-119-1.pdf> (setting forth the attributes of voluntary consensus standard bodies).

and most have a strong interest in doing so to protect the effectiveness, relevance and value of the standards they publish. SDOs that incorporate the international standards principles and work through an open, transparent process to develop regional standards, provide valuable input to international standards as well. As an example, along with CTA's first-hand knowledge as an SDO, many of CTA's members are engaged in the 3GPP process to develop next generation network standards such as 5G and 6G. CTA's members, including many U.S.-based companies, view 3GPP as a key example of the international industry standards process delivering valuable consensus outcomes. CTA members are successfully deploying next generation networks as well as the numerous devices that utilize those networks—leveraging industry-based standards.

B. Contrary to the Chinese Government's Approach, the U.S. Government's Standards Engagement Should Fit the Forum to Best Support the Technology Ecosystem

The nature of the U.S. government's engagement should be tailored to the type of standards forum. CTA strongly supports U.S. government participation in nation-state-based SDOs, like the ITU-T.¹⁰ These fora provide important platforms for the U.S. to promote international commitment to voluntary global standards that are open and facilitate technology interoperability. Conversely, industry consensus standards are designed to and should be driven by industry experts with appropriate government participation targeted to areas where it has specific expertise in a particular technology.

In contrast to the U.S., the Chinese government seeks to influence standards-setting in both types of fora as a key tactic to advance its economic interests.¹¹ It has repeatedly declared

¹⁰ See generally CTA Comments, *Input on Proposals and Positions for 2016 World Telecommunication Standardization Assembly*, Docket No. 160509408-6408-01, RIN 0660-XC02, (June 16, 2016), https://www.ntia.doc.gov/files/ntia/publications/cta_comments_re_ntia_itu_iot_standards_rfc-061616.pdf.

¹¹ See generally RFI, 86 Fed. Reg. at 60,802.

China's intention to take a leading role in setting technical standards as part of its effort to catch up to and surpass the West in innovation.¹² With government backing, Chinese companies and officials have increased their influence in important technical SDOs. Chinese representatives control important committees in various standards bodies, and there have been instances of Chinese companies voting as a block on key proposals.¹³ More, the Chinese government is using its Belt and Road Initiative ("BRI") to promote Chinese standards in beneficiary countries and lock foreign nations into Chinese technologies.¹⁴ These developments could have alarming

¹² 2018 U.S.-China Economic and Security Review at 262 (noting that the Belt and Road Initiative is "closely intertwined with and intended to serve Beijing's goals to revise the global political and economic order to align with China's geopolitical interests and authoritarian political system. Some economic goals—such as fueling domestic development, expanding markets and exporting technical standards, and building hard and digital infrastructure—are explicitly stated in China's official policy communiqués.") (citation omitted).

¹³ See, e.g., Testimony of Christopher Krebs, Director of the Cybersecurity and Infrastructure Security Agency, Before The United States Senate Committee on the Judiciary, *5G: The Impact on National Security, Intellectual Property, and Competition*, Question for the Record #11, (May 14, 2019), <https://www.judiciary.senate.gov/imo/media/doc/Krebs%20Responses%20to%20QFRs.pdf> ("Foreign nationals representing foreign companies, including Chinese companies China Mobile Communications Corporation and Huawei, hold key leadership positions on the ITU and 3GPP standards bodies for 5G."); Matt Sheehan, et al., *Three Takeaways From China's New Standards Strategy*, Carnegie Endowment for International Peace (Oct. 28, 2021), <https://carnegieendowment.org/2021/10/28/three-takeaways-from-china-s-new-standards-strategy-pub-85678> (noting that Chinese standards-setting participants were forced to vote for proposals put forth by the major Chinese technology company Huawei in at least one instance); Valentina Pop, Sha Hua and Daniel Michaels, *From Lightbulbs to 5G, China Battles West for Control of Vital Technology Standards*, The Wall Street Journal (Feb. 8, 2021), <https://www.wsj.com/articles/from-lightbulbs-to-5g-china-battles-west-for-control-of-vital-technology-standards-11612722698> ("Chinese officials lead at least four global standards organizations, including the International Telecommunication Union, a United Nations body governing phone and internet connectivity, and the International Electrotechnical Commission, an industry group governing electrical and electronic technologies. From 2015 to 2017, a Chinese official headed the International Standards Organization").

¹⁴ See, e.g., 2018 U.S.-China Economic and Security Review at 266 ("The 'Digital Silk Road'—China's plans for integrating digital sectors like telecommunications, Internet of Things, and e-commerce into its vision for regional connectivity—is a less analyzed but critically important component of BRI. ... [T]he Digital Silk Road aims to channel investment in technology and consumer-oriented sectors to create new markets for Chinese tech companies, enable Chinese companies to lead those sectors, and promote Chinese technical standards."); *id.* at 268 ("Chinese planners believe infrastructure development in BRI countries can open new markets and boost foreign demand for Chinese products, particularly in higher-end manufactured goods (e.g., telecommunications equipment, construction machinery, and high-speed rail equipment). In the process, Beijing has been using BRI to push for acceptance of Chinese technology

consequences for U.S. national security and economic interests. As observed by CTA President and CEO Gary Shapiro:

American companies, especially those grounded in the internet economy, have become globally dominant. That's why China has blocked and copied them, as that nation deploys millions of engineers to further dominate 5G, artificial intelligence, robotics self-driving and cloud computing. ... Beijing does not share our value of privacy and the freedoms we love—of speech, religion, travel, whom we marry and what opinions we can access. Its vision of the future is quite different than ours.¹⁵

The Chinese government's intent to dominate technology standards could erode the innovation and other benefits of the dynamic open technology-driven economy, as standards favorable to China's government-backed "national champions" and its mercantilist approach to international economics slow down innovation and commerce. Furthermore, Chinese government leadership in technology standards could undermine democratic values by facilitating the development of censorship and surveillance technology, both domestically and for sale to other authoritarian regimes.

II. THE U.S. GOVERNMENT SHOULD FOSTER INDUSTRY ENGAGEMENT WHILE AVOIDING POLITICIZING INDUSTRY STANDARDS PROCESSES

A. The U.S. Government Should Address the Chinese Government's Ambitions by Supporting the Engagement of U.S. Companies, and Those Based in Like-Minded Countries, in International Standards Processes That Follow Widely Accepted International Principles

The U.S. government should partner with like-minded free market democratic governments and companies based in free market economies to develop a strategy for (i)

standards in sectors such as high-speed rail, energy, and telecommunications, which challenges the ability of U.S. and foreign companies to compete.") (citation omitted).

¹⁵ Gary Shapiro, *How the New Administration Can Regulate Tech and Compete with China*, Morning Consult (Feb. 1, 2021), <https://morningconsult.com/opinions/how-the-new-administration-can-regulate-tech-and-compete-with-china/> ("How the New Administration Can Regulate Tech and Compete with China").

incentivizing engagement in international standards, (ii) safeguarding open and transparent standards processes and (iii) encouraging other countries to rely on open and transparent international standards. Governments—including the United States—should not seek to directly influence industry consensus processes as the risk of such interference undermining the quality of the standard outweighs any potential short-term domestic benefits. CTA remains convinced that promoting responsible global development and deployment of critical technologies like 5G starts with supporting industry-led, open and voluntary global standards.¹⁶

Even as the study explores China’s participation in standards activities,¹⁷ NIST should affirm the U.S. government’s commitment to promoting industry-led, open and voluntary global standards for communications and information technologies. For example, CTA appreciates National Security Advisor Jake Sullivan’s affirmation that “the Biden Administration is working with allies and partners to shore up the integrity of international standards organizations—where the decisions on patents and technology development and integration are playing out as we speak—so that it’s democracies rather than the coercive or nationalistic efforts of autocracies in these bodies that get traction and drive outcomes.”¹⁸ To the extent that countries try to unduly influence standards creation, the U.S. government should encourage SDOs to be vigilant in protecting processes that reflect international standards principles and monitor potential abuses. Government intervention in standards processes undermine these principles. Therefore, the U.S.

¹⁶ See CTA Comments, *In the Matter of The National Strategy to Secure 5G Implementation Plan*, Docket No. 200521-0144, RIN 0660-XC047, at 15-16 (June 25, 2020), <https://www.ntia.gov/files/ntia/publications/cta-06252020.pdf>.

¹⁷ See RFI, 86 Fed. Reg. at 60,802.

¹⁸ Press Release, The White House, *Remarks by National Security Advisor Jake Sullivan at the National Security Commission on Artificial Intelligence Global Emerging Technology Summit*, (Jul. 13, 2021) <https://www.whitehouse.gov/nsc/briefing-room/2021/07/13/remarks-by-national-security-advisor-jake-sullivan-at-the-national-security-commission-on-artificial-intelligence-global-emerging-technology-summit/>.

and like-minded governments should partner with the private sector on other ways to promote U.S. industry engagement in international standards and support American leadership on the global stage.

B. The U.S. Government Can Best Support U.S. Interests by Promoting Open Standards Processes, Encouraging Standards Engagement and Lowering Barriers to Participation

The government can best support U.S. technological leadership and economic competitiveness by finding ways to encourage industry involvement in standards processes and lowering barriers to participation, rather than directly intervening in industry standards processes. Indeed, in Shapiro’s words, “America can win this technology race, if our innovators are presented with smart and targeted rules rather than broad, top-down government mandates” or intervention.¹⁹ CTA recommends the government work with industry to develop and implement a strategy to achieve these goals, and consider including the following steps in that strategy:

First, the U.S. should repurpose existing funds to help cover the expenses of standards engagement.

Second, the U.S. government should work with SDOs to monitor for potential abuses and take steps to counter anticompetitive practices.

Third, the U.S. should encourage more domestic participation in international standards by hosting major standards meetings in the United States. International travel places a significant and often prohibitive burden on potential standards participants. Many more participants can justify the expense of standards participation if offered the opportunity to engage in their home

¹⁹ Gary Shapiro, *How the New Administration Can Regulate Tech and Compete with China*.

country. Hosting a standards meeting also gives the U.S. the opportunity to showcase its technology and marketplace to experts from across the world.

Fourth, the U.S. should also consider ways to lower barriers to travel into the U.S. for foreign participants. To fully realize these opportunities and to ensure America's competitiveness and status as a global tech leader, policymakers must adopt immigration reforms that attract the world's best and brightest—increasing the number of H-1B visas, supporting the International Entrepreneur Rule and instituting a startup visa program to allow foreign nationals to work in the U.S. if they create jobs.²⁰ This is equally important in the standards setting process. To develop high quality technology standards, the U.S. must streamline the process for international experts to travel into the U.S. for standards meetings. By making it easier for foreign standards participants to enter the country at appropriate times, U.S. SDOs are enabled in hosting international meetings, thus enhancing the U.S. status as a global standards leader.

Finally, the U.S. should work closely with like-minded partners—such as free market democracies and multi-national organizations—to harmonize this approach to promoting international standards based on the technical expertise of private sector innovators.

III. CONCLUSION

The U.S. can and should do more to promote international standards development in light of China's commitment to directly influence the standards setting process to favor Chinese companies, technologies and policies. However, the government should work with industry on a strategy to do so without politicizing the standards process. Importantly, industry-led SDOs should remain just that: industry-led with outcomes driven by subject matter expertise. To foster standards that reflect U.S. interests, the U.S. government should promote good standards

²⁰ See CTA, Advocacy: Immigration, <https://www.cta.tech/Advocacy/Issues/Immigration> (last visited Dec. 5, 2021).

processes, encourage participation and lower barriers to standards engagement. CTA looks forward to continued partnership with NIST on these efforts to promote innovation and competition across the technology marketplace.

Respectfully submitted,

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