ITI Promoting Innovation Worldwide

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ITI Response: NIST RFI on China's Policies and Influence in the Development of International Standards for Emerging Technologies

Introduction & Overarching Considerations

The Information Technology Industry Council (ITI) appreciates the opportunity to provide a response to the National Institute of Standards & Technology (NIST) Request for Public Comments in preparation for NIST's selected research firm's study on People's Republic of China (PRC) Policies and Influence in the Development of International Standards for Emerging Technologies. The Information Technology Industry Council (ITI) is the premier global advocate for technology, representing the world's most innovative companies, including leading companies involved in the information and communications technology (ICT) standards development process. Founded in 1916, ITI is an international trade association with a team of professionals on four continents. Our diverse membership and staff provide policymakers with the broadest perspective and thought leadership from technology, hardware, software, services, and related industries.

As the NIST-selected research organization assesses China's policies and influence on international standards, it is important to first review the current landscape, which is large, complex, and dynamic. There are thousands of standards development organizations (SDOs) worldwide with tens of thousands of participants contributing to many thousands of standards each year. These standards bodies – and their participants – follow the principles of open, transparent, industry-led, and consensus-based discussions supported by robust governance processes in pursuit of international standards that foster interoperability across markets and are best suited to consumer and technology needs. In our response, ITI seeks to provide NIST and the selected research organization with suggestions regarding metrics of success in standards development, indicators of influence, how to assess the governance of rules-based SDOs and consortia, and some of the misconceptions and policy proposals about standards in the public domain that should be reassessed.

The U.S. has a longstanding and successful policy of supporting industry-led, market-driven, voluntary, consensus-based standards development; yet recent questions about China's *intent* to exert greater influence on standards have caused some policymakers to question the success of the U.S. standards approach without significant discussion with industry or objective analysis of any problem. While it is appropriate for policymakers to ask whether current policy remains effective, thorough research and assessment – using relevant metrics – must be done before conclusions are drawn. Ultimately, U.S. and multinational companies must be allowed to contribute robustly to standards development efforts, or risk ceding ground to competitors – this includes the ability to contribute to shape future technology, even where entity-listed companies are also present. To the extent that concerns about China's participation in standards development exists, we encourage research to focus on identifying whether governance models are sufficiently robust and transparent rather than relying on assertions that the number of participants or contributions alone are problematic. ITI hopes that NIST-selected researchers will seriously consider this dynamic and the need to avoid basing research on potentially false premises.

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How to Assess China's Ability to Promote its own Interests in International Standards for Emerging Technologies & Impact on Technical Solutions

Despite China and other nations' proclamations to lead in the development of international standards or succeed in having X number of standards adopted internationally, the rules and governance processes of SDOs and consortia prevent undue influence of any single actor. ITI encourages researchers to carefully review any allegations of countries' manipulating the development of international standards by *assessing whether any attempted undue influence succeeded or failed*. This metric is often absent in policy discussions regarding the potential threat posed by China's ambitions or influence efforts.

That said, collaborating and advocating among participants to support a proposal is part of the consensus process within SDOs. In nearly all organizations, proponents of a proposal will socialize the proposal with other participants to seek their feedback, sometimes modifying their proposal along the way to accept a proposed improvement. Each organization has procedures that safeguard against inappropriate behavior regarding voting (such as undue influence from other voters, committee chairs, etc., over a voter's decision). While the details are unique to each organization, companies are careful to assess the rules and governance structure of each standards organization before participating. Most standards organizations also have established procedures that allow for appeals to be considered if any participant believes there has been conduct that violates the stated rules of the decision-making processes. Good governance systems are transparent, flexible, and responsive to identified issues to maintain a fair standards development process. Indeed, it is these same rules that also protect the interests of a minority voice from *any* interested stakeholder (industry, government, academic or civil society). Further, it would not be in any company or government's interest to ignore unusually dominant or aberrant behavior based on one entity's efforts to promote a certain outcome.

How to assess China's participation in international standards setting organizations over the previous 10 years, including leadership roles in standards drafting technical committees, and the quality or value of that participation

For the past 20 years, the U.S. and European governments as well as many in industry and stakeholders worldwide have been advocating that the Chinese *increase* their participation in the international standards system. The U.S. government has funded and participated in decades of capacity building events and education programs, which has been augmented through NGOs, industry associations, and individual company engagements with Chinese government agencies, research institutions, and industry. The result has been an increase both in international standards participation by Chinese stakeholders and broader adoption of international standards in the Chinese marketplace -- both of which are desirable outcomes. In part, industry encourages countries and companies to participate in international standards bodies as a means of countering governments' tendencies to develop country-unique standards that may become de-facto market access impediments when referenced in law or regulation or pose problems for interoperability of products or services.

When measuring the impact of participation in standards activities, the focus should be on *outcomes, not number of participants or contributions*. To assess the value of participation in a standards body, one must evaluate if the final specification, as adopted by the expert community or the market, represents

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the contributions of any participant. A published standard that is neither market relevant nor broadly adopted is essentially of little value. Therefore, the adoption and market relevance of standards is perhaps the most important metric. While market relevance may be one of the most difficult metrics to quantify on a broad scale, ITI recommends that researchers study examples of market-driven, industry-led ICT standards that have achieved broad global adoption versus limited or failed efforts of government-driven standardization efforts.

Any analysis regarding leadership positions must account for the fact that the amount of influence associated with any given leadership role varies widely from SDO to SDO, and even from working group to working group. In many cases, a chair or vice chair is a procedural, neutral and managerial role meant to manage the flow of work within a group. Many SDOs also have codes of conduct that apply to all participants, including individuals in leadership roles, allowing recourse for any perceived violation.

To the extent the research organization wishes to evaluate participation and leadership, *Baron and Kanevskaia 2021* is a useful reference. In analyzing leadership trends in four large SDOs – 3GPP, IETF, IEEE 802.11, and OneM2M – it demonstrates that even among large SDOs the trends in leadership composition are not uniform and that leadership selections are far more dependent on individual characteristics and expertise than they are on affiliation or nationality.

Assessing the effect of China's standardization strategy and ''China Standards 2035'' on emerging technologies

China Standards 2035 has gained attention among U.S. policymakers and media, in part because of the reaction to and suspicion surrounding *Made in China 2025*. However, it is important to recognize that lofty strategic plans – and in this case, those intended largely for a domestic audience – are aspirational, with China Standards 2035 viewed domestically as a research project for the national standardization development program. This does not reflect China's current impact on standardization. Further, many developed countries have national standards strategies that reflect an intent to maintain or grow standardization leadership in support of their local constituents. When considering China's standardization strategy, ITI encourages researchers to focus on China's more specific reform efforts such as the 2017 Standardization Law, which seeks to streamline and reduce redundancies in China's standardization system and bureaucracy.

Notably, China's recently released *National Standardization Development Program Outline*[1], associated with China Standards 2035, indicates some positive shifts towards a more "market-oriented" and "quality over quantity" approach and greater openness to foreign participation. There are also gaps in the Chinese strategy as it relates to a lack of a single national accreditation model which would put in place appropriate safeguards in the Chinese domestic standards system such as the U.S. has via the *American National Standards Institute (ANSI) Essential Requirements*.

[1] http://www.news.cn/politics/zywj/2021-10/10/c_1127943309.htm

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How to assess whether international standards for select emerging technologies are being designed to promote interests of the People's Republic of China as expressed in the ''Made in China 2025'' plan to the exclusion of other participants.

The factual premise for this question has not been established. We advise researchers to consider the rule-based processes of SDOs, which are intended to guard against undue influence by any individual stakeholder (including government stakeholders). If this issue is to be addressed by the researchers, the question to address should focus on whether any body that meets the widely accepted principles enumerated in the *Decisions and Recommendations Adopted by the WTO Committee on Technical Barriers to Trade (TBT) Annex 3*[2] would enable such influence from any party. Every participant in a standards process seeks outcomes favorable to their interests. Standardization that is open to all interested stakeholders is a pro-innovation activity, because these competitive factors play out under the structure of well-defined rules.

ITI recommends that researchers review Chinese domestic standards that may not align with international standards and often become mandatory for market access to China. This behavior is not unique to China, but it does have the problematic effect of advantaging domestic technology over foreign competitors – a stated goal of the Chinese government in its pursuit of increasing self-reliance and indigenous innovation.

How to assess previous practices used by the People's Republic of China while participating in international standards setting organizations may foretell how the People's Republic of China is likely to engage in international standardization activities of critical technologies like artificial intelligence and quantum information science, and what may be the consequences.

Participation of any stakeholder will generally be successful if contributions meet the needs of current technology, consumer and market demand, and gain broad acceptance in global markets. These factors are influenced by investment in and development of new technologies that address industry needs and consistent participation in key standards bodies over time. As discussed above, well-governed SDOs prevent undue influence or disruption of consensus-based processes. To the extent that China or any country wants its industries to succeed in and influence international standards, development of such leading technologies would be a prerequisite. As Chinese companies continue to become more successful in the global market, it is reasonable to expect that they will become more active, and potentially more successful, in international standards development. This is part and parcel of industry competition to develop the most globally appealing technologies *and* cooperation for international standards to ensure that products and services work seamlessly across global markets.

Any interested party wishing to exert influence should participate with strong, technically-sound contributions. Industry will only participate in standards work if the resulting standards are likely to meet marketplace objectives for that firm.

[2] https://www.wto.org/english/tratop_e/tbt_e/principles_standards_tbt_e.htm

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How to develop recommendations on how the United States can take steps to mitigate the influence of the People's Republic of China and bolster United States public and private sector participation in international standards-setting bodies.

Before recommending potential new policies or laws, ITI strongly recommends that researchers assess current U.S. policy, regulation, and law with implications for standards and whether they have had the intended effect. Given concerns with respect to China's technological and economic ambitions, industry has seen a proliferation of U.S. policies and bills with significant, negative implications for standards participation and competitiveness. Most pressing among these is a problematic rule stemming from the May 2019 Entity List update and subsequent rules that created an exemption for standards from export controls in certain bodies in which Huawei participates.[3] As written, the guidance inadvertently prevents participation of U.S. companies in ICT-related standards bodies in which *any other listed entities* also participate. This has led to the unfortunate consequences of decreasing U.S. company participation in certain standards bodies and ceding ground to Chinese companies – as well as negatively affecting the credibility and trust of U.S.-based entities as truly open, consensus-based, and international SDOs. Despite over 18 months of concerted industry advocacy and suggestions – including expanding the exemption from *Huawei only* to *all listed entities* – the rule has not been revised to address these harms. Relatedly, given the diversity of SDOs and consortia globally, standards development bodies have struggled to interpret the June 2020 Commerce Bureau of Industry and Security (BIS) interim final rule[4] and whether their respective organizations meet the OMB A-119[5] definition of a standards development organization. Given the difficulty of creating a one-size-fits all (or even most) SDO definition, ITI recommends that the U.S. government exempt *standards development activities* from the export administration regulations (EAR) rather than attempting to exempt SDOs. ITI strongly urges the U.S. government to approve and publish a rule change that BIS has worked diligently to craft in a manner that will protect national and economic security while removing the current rule's undue restrictions and harm to industry.

ITI encourages researchers to assess the negative and positive impacts of certain U.S. policies and rules to determine what has proven effective versus deleterious. Though the stated goals of many recent U.S. policies aim to protect national security and economic competitiveness, industry has only observed negative ramifications of these well-intended but fundamentally flawed policies.

Promoting Adoption of International Standards

Voluntary, consensus-based, open-participation technology/ICT standards are important tools to support U.S. technology competitiveness, enhance U.S. economic growth, and improve quality of life. The United States should maintain support for the private sector-led standards model and should explore ways to strengthen support for private sector leadership. The U.S. government should make clear its unequivocal support for the global, open, rules-based standardization system that is industry-led and consensus-based. For decades the USG has been a leading voice in support of this model, to the

[3] https://www.federalregister.gov/documents/2020/06/18/2020-13093/release-of-technology-to-certain-entities-on-the-entity-list-in-the-context-of-standards

[4] https://www.federalregister.gov/documents/2020/06/18/2020-13093/release-of-technology-to-certain-entities-on-the-entity-list-in-the-context-of-standards

[5] https://www.nist.gov/system/files/revised_circular_a-119_as_of_01-22-2016.pdf

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benefit of U.S. competitiveness. As the issue of China competitiveness takes on ever more weight, it is critical for the USG to reinforce its support for rules-based standards governance and to allow the industry to pursue standards outcomes based on technical merit.

Openness is critical to standardization: the U.S. should continue to champion and model openness and should not attempt to exclude any country or organization from participating in any standards organization, or prevent U.S. stakeholders from participating in any standards organization that is open to participation for all interested stakeholders. The USG should not propose changes to the structure and processes of standards bodies that industry considers well-functioning; rather, it should uphold the structure and good governance practices in standards organizations. The focus should be on providing support to facilitate U.S. participation and leadership roles in standards setting from all interest categories such as industry, government, user, SDOs, etc.

Other Considerations

A 30-day response window should not be understood as a means of collecting data comprehensive enough to offer rigorous answers to the questions the RFI poses. While some relevant data has previously been collected, analyzed, and published, the selected research organization will need to conduct rigorous analysis of both RFI responses and other available data.

SDOs generally strive to make their decisions based on technical merit and business relevance, not geopolitics. Many are global organizations with participants from all over the world. The mere act of responding to this RFI could jeopardize the ability of an SDO to continue to be viewed as a neutral technical forum. As a result, SDOs may well choose not to supply participation data or other responses to this RFI. We encourage the research team to be very explicit in its analysis about any gaps in data collection that may be encountered during the study.

ITI appreciates the opportunity to provide information to inform additional study of China's influence on international standards development. We hope that NIST and its selected researchers will continue to engage with industry, and we would be happy to provide additional input upon request.

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