

**Before the
National Institute of Standards and Technology
Gaithersburg, MD 20899**

In the Matter of)
)
The Study on People's Republic of China) NIST Docket Number 211026-0219
(PRC) policies and influence in the)
development of international standards for)
emerging technologies)

**COMMENTS OF THE ALLIANCE FOR
TELECOMMUNICATIONS INDUSTRY SOLUTIONS**

The Alliance for Telecommunications Industry Solutions (ATIS) hereby submits these comments in response to the Request for Information (RFI) released by the National Institute of Standards and Technology (NIST) soliciting input on the People's Republic of China's (PRC) policies and influence on the development of international standards for emerging technologies. ATIS appreciates NIST's review of this important topic. As one of the leading developers of standards used by North American information and communications technology (ICT) industry, ATIS has a strong interest in ensuring that standards development continues to promote innovation. ATIS is pleased to have the opportunity to respond to the proceeding.

I. BACKGROUND

ATIS is a major stakeholder in the global ICT standardization ecosystem. ATIS develops standards and technical deliverables on a broad range of important issues, including 5G, the 5G Supply Chain, call authentication and robocalling, non-terrestrial networks, emergency services, distributed ledger technology, cybersecurity, and a host of other priorities. ATIS members include both United States (U.S.)- and foreign-based companies and organizations, representing all industry sectors, including wireless and wireline service providers/network operators, cable

operators, satellite operators, equipment manufacturers and suppliers, software developers, and content and applications providers.

In addition, ATIS is a founding partner and the North American Organizational Partner of the 3rd Generation Partnership Project (3GPP), the global collaborative effort that has developed the 4G Long-Term Evolution (LTE) and 5G New Radio (NR) wireless specifications. As a 3GPP Organizational Partner, ATIS' members have the opportunity to contribute to the technical work of 3GPP. ATIS is also a founding Partner of the oneM2M global initiative, a member of the International Telecommunication Union (ITU), and a member of the InterAmerican Telecommunication Commission (CITEL).

Beyond its standards work, ATIS also convenes key North American ICT companies in identifying future technology drivers and industry needs. ATIS' latest initiative, the Next G Alliance, brings together more than 70 members from industry, academia, and government to ensure North American leadership in the next generation of advanced communications technology. The Next G Alliance is developing the [National 6G Roadmap](#). Taking a holistic view of the 6G marketplace and the broader environment, the Roadmap will establish the North American vision for 6G and beyond. Geared toward the eventual commercialization of 6G, it will address the full lifecycle of research, standardization, development, and manufacturing and will be a major contribution toward shaping the networks of the future. The Next G Alliance aims to provide a strategic platform for North American leadership in 6G that is compatible with the market-driven North American economy and allows North America to robustly engage with strategic initiatives in other regions.

II. COMMENTS

A. Value of Industry-led Standardization to the Creation of Global Markets

ATIS and its members recognize the value of industry-led standardization in creating global markets and a more competitive landscape for goods and services. Global technology and ICT standards are the foundation of a transparent and open competitive ecosystem and a key step in bringing new interoperable technologies to the mass commercial market, creating significant value across the entire technology ecosystem. ICT standards facilitate interoperability while enabling product differentiation and creating or expanding markets of existing products and technology. Global standards allow for cost efficiency through economies of scale and multivendor sourcing, reduce market risk, improve reliability, and enhance technology by encouraging participation, collaboration, and competition from a diverse set of companies. This value is what drives participation in standards organizations such as ATIS.

The U.S. and U.S.-based companies have benefitted greatly from international industry-led standards setting processes, as they are designed to favor the most innovative solutions. These processes emphasize transparency, openness, and consensus to reward the best technologies and, in ATIS' experience, have largely succeeded in achieving that goal. The resulting global standards have provided U.S.-based companies with the ability to market their innovations world-wide, competing on the basis of their technology without having to conform to different standards in different parts of the world. In that vein, while ATIS believes there are steps the U.S. Government could take to strengthen participation by U.S.-based companies in global standards bodies, these steps must not undermine the existing industry-led, consensus-based model. Specifically, government efforts to direct or lead standards-setting initiatives – as opposed to promoting, advancing, and supporting industry-led efforts – risk both undermining

the very innovation that has driven U.S.-based companies' historic success under the existing model and invites more aggressive intervention by countries with government-directed economies, such as China.

B. Participation in Standards-Setting the People's Republic of China

The RFI seeks comment on China's participation in international standards-setting organizations. There has been considerable focus recently on the increase in participation by Chinese-based companies in this arena; ATIS' experience in 3GPP confirms this focus is warranted.¹ As an Organizational Partner of 3GPP, ATIS has had the opportunity to evaluate participation in two key technical specification areas: Service and Systems Aspects (SA); and Radio Access Networks (RAN). As for participation in the 3GPP RAN, RAN1, RAN2, RAN3, SA, and SA2 WGs, companies based in China are some of the most active in terms of meeting attendance and WG voting rights, and participation from these companies has been increasing. ATIS also notes that there are currently no ATIS or North American companies in the leadership of certain 3GPP RAN Working Groups (WGs).

While Chinese-based companies, with the direction and support of the Chinese government, have been able to dramatically increase participation in international standards organizations such as 3GPP and ITU, it would be a mistake for policymakers to look solely at the numbers in evaluating whether China has undue influence in the development of important standards. As noted above, the transparent, consensus-based model utilized by standards-setting organizations such as 3GPP are designed to favor the best technology. Nonetheless, while

¹ See, e.g., *Mapping the International 5G Standards Landscape and How It Impacts US Strategy and Policy*, A. Bruer and D. Brake (Nov. 8, 2021) (available at [Mapping the International 5G Standards Landscape and How It Impacts U.S. Strategy and Policy | ITIF](#)).

standards-setting is designed to promote innovative solutions, a dominant presence in leadership and participation within Standards Development Organizations (SDOs) can certainly influence outcomes. We see this in China's clear intent to assume formal and informal leadership roles within 3GPP. Up to one third of the participants in key technical committees are from Chinese companies. Stronger representation from companies in market-based economies would serve as an effective counter-balance to these efforts.

C. Government Support for STEM Education and Research and Development

More holistically, however, long-term success in global standards depends upon the availability of skill sets that drive technology innovation and leadership. Government has a critical role in supporting STEM education, along with research and development, which are the foundation of ensuring a pipeline of innovative solutions that will maintain leadership of U.S.-based technology companies and allow the U.S. economy to realize the benefits of such leadership. In particular, ATIS notes that the U.S. has fallen behind in STEM education², including a decrease in the number of U.S. graduate students pursuing advanced technology degrees (MS and PhD) levels.³

D. Recommendations

ATIS offers the following steps the government could take to reinforce the strengths of the existing industry-led standards process:

Support Greater Participation by U.S.-based companies in Global Standards

Development Activities: As we explain above, while success in standards processes is not purely

² <https://www.forbes.com/sites/markkantrowitz/2021/11/07/us-slips-to-third-in-international-science-and-math-competitions/?sh=21f1b5037db4>

³ <https://www.insidehighered.com/news/2021/12/03/survey-shows-annual-decline-number-phds-awarded>

a function of numbers of participants, effective participation and leadership by a broad cross-section of companies can certainly influence outcomes. This commitment, however, involves a significant investment of private sector resources -- time, dollars, and personnel. 3GPP and ITU each have attendance requirements in order to maintain voting rights, and holding leadership positions requires even greater commitments. Skilled engineers, particularly those with international standards experience, are in high demand and it is estimated that it costs more than \$300,000 per year for each participant a company dedicates to such efforts.⁴ Efforts to participate in multiple organizations and committees quickly becomes tremendously costly and can be cost-prohibitive for smaller companies.

The U.S. Government should also consider other steps to encourage greater participation by U.S.-based companies in U.S.- based standards organizations such as ATIS. In its role as North American Organizing Partner for 3GPP, ATIS acts as a key convener for companies operating in the U.S. in the development of standards for advanced wireless technologies. As such, North American-based companies should be encouraged to join 3GPP through ATIS, the North American 3GPP Organizational Partner. The government should also encourage participation in ATIS' Next G Alliance. As noted above, the ATIS Next G Alliance is bringing together more than 70 members from the private sector, academia, and government to chart a path for North American leadership in 6G. While the Next G Alliance will not develop standards, its mission is to develop an early common framework and roadmap towards the ITU's IMT-2030. Full U.S. governmental support of these activities will be important to their success.

⁴ *Id.*

Increase U.S. Government Personnel and Technical Contributions to Support

Industry-Led Standards Development Efforts: The greatest strength of U.S. and other market-based economic countries in the standards context is the ability to out-innovate – and the government risks losing this advantage when it tries to lead rather than support the existing industry-led model. However, active government participation in global standards development through organizations such as ATIS and 3GPP can ensure that the U.S. Government’s interests as a user of technology and a promoter of national leadership and innovation are met. At the same time, the U.S. Government should avoid politicization of technical decisions and ensure that standards processes remain fair and transparent and resulting standards are based on technical merit so that U.S.-based companies are operating on a level playing field with other regions of the globe.

Strengthen International Cooperation in Support of Standards: Efforts to promote well-functioning global standards development that ensures merit-based standards will be most effective if complimented by similar efforts from like-minded international partners. The U.S., E.U. and other market-based regions of the globe, share a common interest to ensure that decision-making in global standards bodies continues to be based on innovation and the quality of technical input, not on pressure artificially imposed by economic competitors.

Efforts To Eliminate Barriers to U.S.-based Company Participation in International Standards Processes: The U.S. Government should clarify the scope of the export controls restrictions imposed since May 2019 by the Department of Commerce Bureau of Industry & Security (BIS). ATIS believes that the scope of these export rules should be clarified to: (1) permit authorized releases to all entities on the Entity List that participate in standards activities (not just to Huawei and its listed affiliates); (2) permit the release of both “technology” and

“software” that is designated as EAR99, or controlled on the Commerce Control List for anti-terrorism reasons only; and (3) confirm that the scope of permitted standards development activities includes any action taken by a SDO for the purpose of developing, promulgating, revising, reissuing, interpreting, or otherwise maintaining a voluntary consensus standard, including standard conformity testing and assessment activities. In the absence of rules clearly allowing U.S.-based companies to participate in standards-setting organizations alongside companies on the Entities List, the U.S. can be at a significant disadvantage in shaping critical standards.

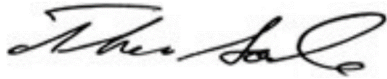
Invest in Skills that Will Ensure Long-Term Leadership in Technological

Innovation and Standards: As emphasized above, one of the most important steps the U.S. Government can take in the long-term to promote U.S. interests in standards development is to ensure a supply of the skilled workers necessary for driving innovation. For example, supporting STEM education and development programs for universities to promote standards in undergraduate and graduate engineering/computer science programs would go considerable distance to ensure a pipeline of necessary skills for U.S.-based businesses. Additionally, increased government support for basic and applied research and development can accelerate industry-led innovation.

III. CONCLUSION

ATIS appreciates this opportunity to comment on NIST's RFI on PRC influence on the development of international standards for emerging technologies. If there are any questions about this matter, please do not hesitate to contact the undersigned.

Respectfully submitted,



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