



U.S. Department of Commerce
National Telecommunications and Information Administration
Docket No. 160331306–6306–01

**The Benefits, Challenges, and Potential Roles
for the Government in Fostering the Advancement
of the Internet of Things**

Comments from the American National Standards Institute
June 2, 2016

As the coordinator of the private-sector-led U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from energy distribution to the information and communication technology (ICT) sector, and many more. ANSI also represents the U.S. internationally as the member body to the International Organization for Standardization (ISO) and, via the U.S. National Committee (USNC), to the International Electrotechnical Commission (IEC).

ANSI is pleased to submit these general comments on the Internet of Things (IoT) and the importance of this topic to the standardization community.

When it comes to IoT, we know three things to be true:

- IoT is a highly emerging area of technology convergence. While many think of this as an ICT-centric issue, it has already begun to grow beyond traditional ICT areas, and will likely soon encompass significant fractions of product and service sectors.
- An abundance of U.S. stakeholders, including U.S. government representatives from the U.S. Department of Commerce and other agencies, are already involved in domestic and international standards work for IoT. One key area where this work is taking place is within the ISO/IEC Joint Technical Committee (JTC) 1, *Information technologies*, where the U.S. holds both the secretariat and the chairmanship.
- No single “home for standardization has yet emerged or likely will emerge, because of the wide range of technologies that constitute the IoT. As a result, no single standards organization has the resources or the expertise to develop all the standards needed for the IoT, and work will take place in a range of standards organizations, including JTC1, the International Telecommunication Union’s Telecommunication Standardization Sector (ITU-T), consortia, and specification organizations.

For these reasons, ANSI submits these comments to encourage broad understanding of the standards landscape, and in particular, of the virtues of voluntary consensus standards, which we believe will produce the strongest results in the IoT space.

First of all, how important are standards in a broad sense? According to a 2004 U.S. Department of Commerce¹ report, standards issues were estimated to impact 80% of global commodity trade. And when we're talking about one of the world's strongest and most vibrant trade relationships, there are a lot of dollars and jobs on the line globally. Experts estimate that the IoT will consist of almost 50 billion objects by 2020.²

When addressing the area of IoT, which also encompasses smart technologies such as smart grid, smart homes, smart cities, intelligent transportation systems, and smart and wearable devices amongst many others, we need to embrace the importance of globally relevant standards and global approaches to conformity assessment.

How do we define an international standard? The World Trade Organization (WTO) offers an answer: the WTO Technical Barriers to Trade (TBT) Agreement Committee Decision³ states that the global relevance of a standard is determined by how it was developed, not where. More specifically, the Decision states that the development of international standards must rely upon a number of principles, including openness, impartiality, consensus, transparency, and coherence, among others.

In other words, the global relevance of a standard cannot and should not be measured by which organization developed it. The degree to which a standard is used in the global marketplace is the best measure of an international standard.

In the United States, we refer to this concept as the "multiple-path approach."

The U.S. standardization system is fundamentally built on the needs of the marketplace, where users decide which standards best meet their needs, and in which standards development venues they wish to work. Ultimately, the U.S. standardization community supports the fact that there are multiple paths to global relevance – as articulated by the WTO TBT Agreement Committee Decision – and that it is the marketplace that decides the utility or applicability of any given standard.

ANSI strongly advocates for the multiple-path approach in any standards-related discussions surrounding IoT. This will help to ensure a level playing field for standards organizations, while also looking to adopt and promote those standards that have been developed in a balanced, open, consensus-based process.

The IoT is an area where the private sector should have the lead, and ANSI has heard from private-sector stakeholders that some feel standards solutions are premature where such innovative and rapidly changing technology is concerned.

We take a similar approach on the conformity assessment side of the dialogue: the private sector should take the lead, and we should look for solutions that have global relevance. Consider how much time and money could be saved if conformity assessment providers that test, certify, and accredit could be

¹ United States Department of Commerce, [Standards and Competitiveness – Coordinating for Results](#). Washington, DC May 2004, p1
² Dave Evans (April 2011). ["The Internet of Things: How the Next Evolution of the Internet Is Changing Everything"](#) (PDF). Cisco.

³ G/TBT/1/REV. 10. "Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement"

recognized at a global scale. Products, services, and personnel would cross borders far more easily, without the need for duplicative testing in each market. This would be a huge benefit to companies globally.

The U.S. ICT sector, ANSI, and its members will want to see that the work in the IoT sector moves forward with a global, inclusive approach to standards and conformance. ANSI strongly encourages, the U.S. Department of Commerce (and other U.S. government agencies) to strongly advocate for a private sector led and market responsive standardization approach for the IoT, in its bilateral and multi-lateral engagements with other countries, consistent with the *U.S. Standards Strategy*³ and existing U.S. government law and policies relating to U.S. government's participation in, and use of, standards.⁴ We encourage the Department of Commerce and the National Telecommunications and Information Administration to continue to rely upon the public-private partnership for standardization that is the cornerstone of our U.S. standardization system, and look to private-sector-led standards and conformance programs to bring the IoT vision to reality.

³ www.us-standards-strategy.org

⁴ See OMB Circular A-119 and the National Technology Transfer and Advancement Act