Consumer
Technology
Association™

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BY ELECTRONIC SUBMISSION

Dr. Walter G. Copan
Under Secretary of Commerce for Standards and Technology and NIST Director
National Institute of Standards and Technology
100 Bureau Drive
Stop 2000
Gaithersburg, MD 20899

Re: **Request for Information on Federal Engagement in Development of Artificial Intelligence Technical Standards and Related Tools**

Dear Dr. Copan,

The Consumer Technology Association ("CTA")[1] respectfully submits these comments in response to the National Institute of Standards and Technology ("NIST") request for information ("RFI") on federal engagement in the development of technical standards and related tools in support of reliable, robust and trustworthy systems that use artificial intelligence ("AI") technologies. As the principal U.S. trade association representing the consumer technology industry, CTA is actively involved in development of AI technical standards. We believe the need for AI technical standards and related tools is being met in a timely manner by organizations. CTA also believes the need for AI standards is sector-specific, and that those who need AI standards will be more inclined to rely on standards specific to their sectors rather than cross-sector standards intended for use across multiple industries.

CTA is an ANSI-accredited standards developer, operating standards committees focused on various aspects of the consumer technology industry. One of

[1] The Consumer Technology Association ("CTA")™ is the trade association representing the $398 billion U.S. consumer technology industry, which supports more than 18 million U.S. jobs. More than 2,200 companies – 80 percent are small businesses and startups; others are among the world's best-known brands – enjoy the benefits of CTA membership including policy advocacy, market research, technical education, industry promotion, standards development and the fostering of business and strategic relationships. CTA also owns and produces CES® – the world's gathering place for all who thrive on the business of consumer technologies. Profits from CES are reinvested into CTA's industry services.

these standards committees is our Artificial Intelligence Committee (R13). Its scope is to "develop standards, recommended practices, and technical reports related to artificial intelligence technologies." This committee formed a working group to focus on AI in health care. That working group's scope is to "develop standards, recommended practices, and related documentation addressing the application of AI in health care (including consumer health, fitness and wellness technology)."

CTA published two whitepapers on AI in 2018, and is currently developing three standards:

- *What is Artificial Intelligence* (published September 2018)
- *Use Cases in Artificial Intelligence* (published November 2018)
- *Definitions and Characteristics of Artificial Intelligence* (under development)
  - Scope: This standard defines terms related to artificial intelligence and associated technologies.
- *Definitions and Characteristics of Artificial Intelligence in Health Care* (under development)
  - Scope: This standard defines terms related to artificial intelligence and associated technologies in health care.
- *The Use of Artificial Intelligence in Health Care: Trustworthiness* (under development)
  - Scope: Artificial Intelligence (AI) is quickly becoming a pervasive tool in the health care industry. This standard explores the impact of the trustworthiness of AI in health care through the lens of the end user (e.g., physician, consumer, professional and family caregiver). Additionally, the standard will identify the unique challenges and opportunities for AI in the health care sector.

The consumer technology industry is very broad. It includes technology that people wear or carry with them, technology people use in their cars, technology people use in their homes, and technology with a wide range of functions – such as personal health, fitness and wellness, audio/video entertainment, security, communications, robotics, and more. CTA's AI standards work is sector-specific in that it addresses the consumer technology sector. However, given the broad nature of consumer technology, we expect to address subsectors individually – hence the creation of our Artificial Intelligence in Health Care Working Group. We believe these subsectors will be able to benefit by coordinating some of their work, for example CTA's development of general definitions and characteristics of AI under its top-level Artificial Intelligence Committee.

The need for an AI technical standard or related tool should be determined by people within the ecosystem in which it would be used. These people might be hardware manufacturers, software developers, consumers, regulators, or other people with a stake in the ecosystem.

Within this approach, it is important to keep in mind that AI is being deployed by companies across industry sectors, and designating a specific industry subsector for different types of products, platforms or services will not always be obvious or clear-cut.

For example, several software companies are leading the work on automotive AI, and telecommunications providers are deploying smart drone technology. As such, subsector-specific standards should be set with input from companies based on the actual services being offered, rather than historical designation of any given company.

It will probably not be as challenging as it may seem at first to identify and develop needed standards because people familiar with an ecosystem will understand the specific needs of the various parties in that ecosystem, and this knowledge will help them understand what needs to be standardized and why.

CTA's membership includes more than 2,200 companies, 80 percent of which are small businesses and startups, and others are among the world's best-known brands. Based on feedback from our members we believe the need for AI technical standards and related tools is being met in a timely way by organizations like CTA.

AI is still an emerging technology. As the AI sector matures we will continue to identify areas in which standards may or may not be needed. Organizations like CTA stand ready to quickly facilitate standards development as the need is identified.

CTA believes that sector-specific AI technical standards need to be addressed by sector-specific organizations. It has long been the case in our society that sector-specific organizations setting standards for human performance in a particular area often take on the role of setting standards for machine performance in that same area.

For example, the U.S. Department of Transportation regulates the training of airline pilots,[2] as well as the performance of aircraft autopilot systems.[3] Also, the Federal Communications Commission used to establish licensing requirements for operators of radio and TV broadcast stations, then it established standards for transmitters to perform many functions automatically.[4] While these applications might not fit the definition of "AI," the principle is the same. If a federal agency is regulating human performance in a particular area, it seems reasonable for that same agency to take the lead in establishing standards for machines performing the same functions.

There are many standards in the consumer technology industry that serve a market need, such as facilitating interoperability between products from different manufacturers, or educating consumers about how products in the same category differ in performance. To the extent that AI-related standards are needed to perform similar functions, they are best developed by experts within the consumer technology industry.

We welcome NIST's forward-looking approach to AI. A federal framework for engagement on AI standards has the potential to provide clarity to government agencies and help ensure that private-sector standards setting efforts are prioritized. NIST should

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[2] *See* 14 CFR Part 61.
[3] *See* 14 CFR Section 25.1329.
[4] See "Unattended Operation of Radio and Television Stations;" Federal Communications Commission; https://www.fcc.gov/media/radio/unattended-operation (May 30, 2019).

keep with its longstanding practice and follow the policy described in OMB Circular A119 Revised. That circular says, "All federal agencies must use voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical."[5] It goes on to say, "Agencies must consult with voluntary consensus standards bodies and must participate with such bodies in the development of standards when consultation and participation is in the public interest and is compatible with their missions, authorities, priorities, and budgetary resources."[6]

Additionally, in accordance with OMB Circular A119 Revised, CTA has extended an invitation to both the Food and Drug Administration and the Centers for Medicare and Medicaid Services to participate in the ongoing standards effort addressing Artificial Intelligence in Health Care. CTA would welcome the participation of other directly and materially affected agencies, in all of our AI standards efforts.

To achieve effective leadership in AI standards development, the U.S. should let industry lead the way. Over the past few decades, industry-led standards development has resulted in amazing advances in computing power, networking capabilities, interfaces, and many other things that have brought us to where we are today. Over the next few decades AI has the potential to improve our lives by an even greater magnitude. For that to happen, innovative companies need to keep trying things. Some things will work; some things won't. We don't know what works until we try. Any standards we develop should be aimed at facilitating this experimentation with an ultimate goal of market acceptance.

Companies and industry groups like CTA understand the societal risks and concerns associated with AI. For example, people don't want AI systems making biased decisions that disadvantage a portion of society. They want to understand why an AI system made a particular decision in cases where something important goes wrong. These issues and others are being actively addressed by AI companies. In order to meaningfully address these challenges, companies need to be able to continue to innovate. In order to learn the best practices for building AI systems, industry must be free to continue to try new and creative paths. Over time, we will learn the best practices for addressing society's concerns and realizing the full potential of AI. As we do, there will be opportunities to standardize those best practices.

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[5] See "OMB Circular A119 Revised;" U.S. Office of Management and Budget; p.17.
[6] *Id.;* p. 27.

For the U.S. to be a leader in AI standards development we need the people developing U.S. standards to have learned the best practices for implementing AI. For them to learn those best practices, they need the freedom to experiment and to innovate.

Sincerely,

Dave Wilson
Vice President, Technology & Standards