

SUBMITTED ELECTRONICALLY VIA AI_STANDARDS@NIST.GOV

July 19, 2019

Artificial Intelligence (AI)-Standards
National Institute of Standards and Technology
100 Bureau Drive, Stop 2000
Gaithersburg, MD 20899

Subject: U.S. Leadership in AI: A Plan for Federal Engagement in Developing Technical Standards and Related Tools

About UL

UL is a premier global independent safety science company that has championed technological progress and societal well-being for 125 years by using research, standards and conformity assessment to address important and emerging safety, security, and sustainability challenges. Its nearly 14,000 professionals are guided by the UL mission to promote safe working and living environments. UL's functional safety and security activities and expertise grant us a broad view of the trends impacting connected technologies. This enables UL to anticipate and act upon technology implementation challenges, leading UL to establish IoT, cybersecurity, and AI related standards and programs that fulfill our mission by bringing the science of safety to the fore.

General Observations

In general, UL believes that the National Institute of Standards and Technology's (NIST) draft plan for federal engagement in standards serves as a significant and meaningful basis to begin outlining the strategic objectives for pursuing the development and use of international standards for AI. UL applauds NIST's recognition that the U.S Government (USG), "...ensure that technical standards...reflect Federal priorities for innovation, public trust, and public confidence in systems that use AI technologies...and develop international standards to promote and protect those priorities." UL also is pleased that NIST recognizes safety considerations tied to the development, deployment and use of AI and has underscored those through the draft *Plan*.

UL appreciates NIST's recommendations to collaborate with the private sector in order to develop and use new standards that are technically sound and suitable for the purposes of USG. In addition, UL welcomes NIST's encouragement of USG participation in private sector standards development and believes USG expertise serves as an important contributor in the consensus process.

UL AI-Related Standards Activity

As noted in our response dated on June 10, 2019 to the Artificial Intelligence Standards Request for Information (RFI) published by NIST, UL has an established and credible history in working with industry to create standards and certification programs. UL has extensive experience in the development of standards for software with an emphasis on cybersecurity, product safety, functional safety, interoperability and the performance of software in multiple domains. In addition, we have many years

of experience conducting conformity assessments of medical devices, industrial control systems, consumer products, alarm security systems, industrial automation systems, and transaction and payment systems, etc. We have testing capabilities around the performance of the software and any safety critical software components.

UL has been actively engaged in the development of proposed ANSI/UL 4600 Standard for Safety for the Evaluation of Autonomous Products. This standard focuses on fully autonomous vehicles and its development has brought together a variety of stakeholders including software developers, sensor and radar manufacturers, ride share companies, car manufacturers, state and federal agencies as well as consumer advocacy groups.

In addition to ANSI/UL4600, UL also has a published standard, ANSI/UL 5500, Standard for Safety for Remote Software Updates, that addresses the safety concerns of remote software updates in relationship to an end product.

Considerations

UL’s additional comments are organized below pursuant to the comment template provided by NIST.

#	Source	Type	Page Line #	Rationale for Change	Proposed Change
1	UL		Page 11, lines 275-276	While system owners have responsibility for the risks related to their AI systems, the US Government has documented responsibilities to protect the general public from undue risks. ¹	This responsibility should be acknowledged in the <i>Plan</i> . Propose language change line 275-276: “While it is up to system owners to determine what risks they are willing to accept, mitigate, or avoid; USG participation in standards development activities will help to ensure the protection of the public from undue risks.”
2	UL		Page 14, lines 367-390	The heading of this section indicates the subject is about prioritizing levels of U.S. Government engagement, yet the body does not provide priorities nor guidance on determining priorities. Suggest that the heading be reworded or the	Change title language to: “Potential Levels of U.S. Government Engagement”

¹ For example, “CPSC is charged with protecting the public from unreasonable risks of injury or death associated with the use of the thousands of types of consumer products under the agency's jurisdiction” <https://cpsc.gov/About-CPSC>

				paragraph be revised to reflect prioritization of activities.	
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Lastly, UL seeks to encourage NIST to consider the importance of conformity assessment schemes to the overall effectiveness of all standardization efforts. Conformity assessment is the demonstration that specified requirements related to a product, process, system, person, or body are being fulfilled. Such demonstrations can include sampling and testing, inspection, supplier’s declaration for conformity, certification and management system assessment and registration. Activities can also include accreditation by a third party of the competence of the bodies performing the above activities. Recognition (usually by a government agency) of an accreditation body’s capability is also a conformity assessment activity if it involves demonstration of fulfillment of specified requirements related to capability. The ability of AI developers to credibly demonstrate the performance and safety of their systems will be critical to establishing trustworthiness.

Conclusion

UL applauds NIST’s efforts in pursuing the development and use of international standards for AI as encourages continued collaboration with the U.S. private sector in the development a comprehensive national level standardization strategy.

UL appreciates the opportunity to provide these comments and looks forward to providing additional, more detailed approaches as these recommendations are developed and implemented. In the meantime, if UL can be of further assistance or if you would like to discuss elements of this submission, please contact Abel Torres (Abel.Torres@ul.com).

Respectfully,

Abel Torres

Abel Torres
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