July 1, 2019

Comment Template for Draft Plan for Federal Engagement in Developing Technical Standards and Related Tools for AI Technologies

COMMENT #	NAME OF COMMENTER	TYPE i.e., Editorial Minor Major	LINE # PAGE etc.	RATIONALE for CHANGE	PROPOSED CHANGE (specific replacement text, figure, etc. is required)
1	Microsoft		1(B) Line 67	Lines 68-73 suggest that "standards" are equivalent to ISO/IEC standards. The US has long supported a rich diversity of standardization types. Recommend that line 73 be amended with a statement that standards can be developed in many types of industry organizations that cover a broad spectrum of formality, structure and approach yet all produce consensus standards.	
2	Microsoft		1(D) Line 122	Recommend that the document recognize there are many existing technology standards that are applicable to AI even if they were originally developed for other technology segments. Examples could include data formats, transfer protocols, cybersecurity practices, privacy practices and cloud services practices. Just because something is relevant to AI does not mean it needs new standardization. This is represented in Table 1 by the starred column titled, "Available" but it may help to clarify this point in the text of the section.	
3	Microsoft		1(D) Line 179 – Table 2	In Table 2, there are two comments to consider: First, Societal and ethical – we suggest that this concept be clarified because the table is not clear. There is a difference between engineering practices associated with responsible/trustworthy AI and the standardization of societal and ethical considerations that are rapidly developing by different countries, legal systems and societal groups. It is possible for engineering standards to over-reach into domains that are inappropriate for such specifications. Second, there should be a star in the "Available" column for Governance as there are information technology governance standards that are equally applicable to AI as they are to other technologies. An example of this would be ISO/IEC 38500 and ISO/IEC 38505. It may be necessary to augment governance standards with particular AI considerations or to create new standards in this regard, but any such work should not preclude the existing good work of applicable standards.	
4	Microsoft		1(E) Line 180	The lit of bulleted items are representative of tools, standards and supporting materials. For example, the first bullet in this list is not a "tool" per se, but rather related to standards. It may make sense to alter the title of 1(E) to make it clear what this section is trying to convey. The other option is to reduce the list to be constrained to tools development specifically.	

Comment Template for Draft Plan for Federal Engagement in Developing Technical Standards and Related Tools for AI Technologies

COMMENT #	NAME OF COMMENTER	TYPE i.e., Editorial Minor Major	LINE # PAGE etc.	RATIONALE for CHANGE	PROPOSED CHANGE (specific replacement text, figure, etc. is required)
5	Microsoft		Footnote 13	Add at the end of the footnote, "…or the international standards ISO/IEC 27018 and ISO/IEC 27701."	
6	Microsoft		1(E) Line 184	Data sets themselves should not be standardized, but metadata schema or taxonomies could be standardized in order to normalize understanding of data whereas the datasets themselves may represent unique innovation and economic value for private parties.	
7	Microsoft		1(F) Line 192	Use cases are being standardized in ISO/IEC JTC 1 SC42. This should be included in a footnote.	
8	Microsoft		1(F) Line 272	Legal, ethical and societal considerations should be considered by those specialists trained in law and ethics. It is challenging for engineers working on technical standards to be expected to address these factors and thus the importance of considering the right problems to be addressed by the right constituencies.	
9	Microsoft		1(F) Line 201 and 205	The implications of line 205, "drive innovation by promoting advancements…" is in conflict with metrics discussed in line 201 – if innovation is moving fast, then the metrics and thresholds will move as well. Standardized metrics (that are necessarily ossified in the standard) may create unintended consequences in opposition to US competitiveness in AI based on rapid innovation. We recommend that the relationship between these two lines be considered before making an assertion in the document.	
10	Microsoft		3 Line 441	In early-mover markets such as AI, it may be difficult to have standards-based solutions for procurement as standards are not yet defined. NIST should consider framing this concern in the text.	
11	Microsoft		3 Line 442	The title of section three creates a correlation between "standards actions" and the recommended actions in the bullet on line 442 - "developing and implementing policies." There should be greater clarity between the role of NIST and standards/tools activities and that of the rest of the USG agencies as well as congress in the establishment of laws and policies for AI. Standards have significant utility in the context of implementation, but they are distinct from the act of creating new laws or policy. This should be more evident from the text.	
12	Microsoft		3 Line 449	Standards development should not be constrained to trustworthy AI only, there are technical and interop objectives that will be of interest as well.	

Comment Template for Draft Plan for Federal Engagement in Developing Technical Standards and Related Tools for AI Technologies

COMMENT #	NAME OF COMMENTER	TYPE i.e., Editorial Minor Major	LINE # PAGE etc.	RATIONALE for CHANGE	PROPOSED CHANGE (specific replacement text, figure, etc. is required)
13	Microsoft		3.2 Line 478	Recommend rephrasing this bullet to encourage government to work with industry and others – "help develop metrics to assess specific and quantifiable trustworthy attributes of AI systems." This is because there are limited AI system attributes that can be currently quantified by a metric. In addition, consider whether to also encourage government to continue to help develop and promote not only metrics, but also benchmark data sets, e.g. for facial recognition. It is noted that in the next section 3, line 502, NIST has included leading in benchmarking efforts, which might contemplate such work . . . but currently the text feels a bit disjointed.	
14	Microsoft		3.2 line 485	International standards on risk management are already under development in ISO/IEC JTC1 SC42. NIST should contribute the finding of the research on this domain "Suggested lead: **NIST (for international standardization contribution) and** research funding agencies."	
15	Microsoft		3.3 Line 498	"Lead and participate in non-traditional collaborative…" "Lead or participate in…" include participation as an objective, the USG does not need to lead most OSS projects, that should be done by industry. Also note that any USG engagement in non-traditional collaborative methods that result in "standards" that affect market access or regulated use will need to be in-keeping with WTO TBT principles. There is risk to US industry if the USG ignores this as other nations could use OSS and regulation in combination to create technology mandates or trade barriers that would be discriminatory to US interests.	
16	Microsoft		Appendix III line 733	"RELATED TOOLS ~~FOR AI STANDARDIZATION~~" the list of tools is useful for the context but very few of them could be consider for standardization. We would recommend that NIST remove "for AI standardization" in the title.	