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Subject: Comments on Draft "US Leadership in AI: A Plan for Federal Engagement in Developing Technical Standards and Related Tools"

The following are comments that suggest corrections or improvements to the draft document.

Comment #1: Should Include Standardized Definition of AI

The document should use the ISO standard definition AI (ISO/IEC 2382 - Information Technology - Vocabulary), which was supported by US industry via de jure accredited standards process. There are two terms, one for the field of study, and the second describes its nature. Here is the proposed edit:

[On the first page, introduce the definitions of AI. A footnote should be included to explain why there are two terms, not one.]

> The following are two definitions for AI [footnote 1], one for the field of study, and the second that describes its nature [footnote 2], as excerpt from ISO/IEC 2382 Information Technology - Vocabulary:
>
> > **28.01.01 artificial intelligence** (1), **AI** (abbreviation): interdisciplinary field, usually regarded as a branch of computer science, dealing with models and systems for the performance of functions generally associated with human intelligence, such as reasoning and learning.
> >
> > **28.01.02 artificial intelligence** (2), **AI** (abbreviation): capability of a functional unit to perform functions that are generally associated with human intelligence such as reasoning and learning. Note: A "functional unit" is a system or subsystem.
>
> [Footnote 1] See ISO/IEC 2382:2015 Information Technology -- Vocabulary, which is a 5000-term terminology standard for the field of Information Technology, which supersedes ANSI INCITS 172-2002 (R2007) Information Technology - American National Standard 517 Dictionary of Information Technology (ANSDIT) (Revision and Redesignation Of ANSI X3.172-518 1996)
>
> [Footnote 2] Just as "terminology" has two terms "terminology" as a field of study (e.g., "I am a terminologist") and "terminology" as a work product containing terms and definitions (e.g., "the terminology of welding"), artificial intelligence has two definitions: the first that corresponds to the field of study, and the second that corresponds to a capability. In formal terminology, these are considered two separate and distinct terms even though they are spelled identically.

Comment #2: Nimble Short-Time Standards Have Always Been Desired, But Fail

In every technology innovation in the past several decades, there is a desire for quick standards, but they never succeed. The reason is: standards, like software for large enterprise projects, take a while to develop - even imperfect, "Good Enough" systems.

It's only the next wave newcomers who believe standards can be reinvented and established in a 1-2 year timeframe.

The NIST document, pages 12-13 "Wanted: Nimble, Multi-Channel Standards Development" is not about standards, but about open source implementations. An implementation is merely and implementation and necessarily a specification (or standard) for a class of systems that can conform to such specification, yet permit a marketplace of varying qualities of implementation. No present developer, group, committee, or institution has such a magic bullet for quick, high-quality standards.

The following CAUTION wording should be included:

> CAUTION: Open Source implementation is not the same as Open standards development. Open Source allows contributors to a common implementation. However, open standards create a document that describes multiple implementations. Achieving and established standard in the time frame of 12-18 months (i.e., a normal technical horizon in business planning) is very very difficult, especially a standard that would expect to have lifetime of at least 5 years (the normal review cycle). Readers should be cautioned that such short-developed standards might also have a shorter than normal lifespan, as they can quickly become outdated and obsolete, e.g., if your organization is based upon 3-5-year plans, then this kind of short-term standard might not be helpful for your system or operations.

Comment #3: Incorrect Citation

In Appendix I, it states:

> ISO/IEC 3WD 22989 Information Technology — Artificial Intelligence — Artificial Intelligence Concepts and Terminology

This is incorrect, it should state WD3 (working draft 3), and it should be clear this is not a standard, and not yet even passed the first stage of voting, comments, and review. The following is more accurate:

> ISO/IEC WD3 22989 Information Technology — Artificial Intelligence — Artificial Intelligence Concepts and Terminology (note: This document is not a standard, it is in its early stages of development, and has not yet been voted on or formally reviewed)