NISO Work Item:
Create a Standards-Specific Ontology Standard
(short title: NISO SSOS)

Proposal for Consideration by the NISO Voting Membership
Approval Ballot Period: November 19-December 18, 2018

The following proposed work item is submitted by: Cord Wischhöfer, DIN Software, Howard Gilson, ASTM International, and Robert Wheeler, ASME

Proposal Last Modified: October 25, 2018
Approved by the NISO Information Creation & Curation Topic Committee November 13, 2018

Work Description

Building on the collaborative momentum of the NISO STS project, we propose to develop and standardize a high-level standards ontology that describes a limited set of core concepts and relationships, beginning with a component to define standards' lifecycle states. This will facilitate use, create deeper, more consistent discovery/navigation, and set a foundation for other semantic application, such as linked data, in the standards ecosystem.

Background/Problem Statement

There are literally hundreds of standards-producing organizations and numerous standards distributors, all of whom could develop their own ontologies, which would hinder consistent discovery and navigation of standards documents. This also adds to the expense of standards publishing, is cost prohibitive for smaller organizations, and inhibits interoperability.

Standards producers and distributors are looking for ways to leverage their XML investment, help their end users save time and effort, expose the data "locked" within standards, and create more dynamic products. This ontology is a first step, building on the NISO STS XML, responding to technology advancements and new user requirements, which include machine readability.

A high-level standards ontology will create a framework that describes a limited set of core concepts and relationships that exists in standard documents that can be built upon and extended, and which will result in greater interoperability of standards and standards data, which in turn will aid standards users, and help advance standards discovery, functionality, publishing, and interoperability. Such a framework could potentially even aid in the development of new standards.

Statement of Work

Goals

- Develop and standardize a high-level standards ontology that describes a limited set of core concepts and relationships that exists in standard documents (and will not endeavor to define subject-/content-specific attributes of the standards), beginning with a component to define the standards' lifecycle state.
- A standardized ontology/framework to enable deeper, more consistent discovery and navigation, help users discern proper applicability in given contexts, provide greater interoperability of

standards and standards data, and set a foundation for other semantic application, such as linked data, advancing standards functionality and the standards publishing ecosystem.
- Start simple and leverage existing frameworks/ontologies wherever possible.

Deliverables

- A standardized high-level standards ontology represented in OWL: Component 01, Standards Lifecycle States and Relationships; other well-defined components, if and as time, as defined below, allows.

Process

- Form a Working Group
- Engage a secretariat for the project
- Review recent work done on a standards ontology by DIN Software, XSB on SWISS, and other efforts to form a basis or starting point
- Review the standards' landscape to determine lifecycle states and relationships that need to be defined
- Create a draft standards ontology for public comment and use
- Respond to any issues raised
- Produce a revised standards' lifecycle component ontology for committee, Topic Committee, and NISO Voting Member approval

Partners and Participation

Co-sponsors: DIN Software, ASME, and ASTM

Participants: Access Innovations, ASME, ASTM, BSI, CSA, DIN Software, IEEE, NEN, SAE, XSB, and others

Participant Types: The most relevant knowledge will be familiarity with standards content, semantic publishing framework, and XML (these could be from standards producers, service providers, libraries, or distributors).

Proposed Timeline

New Work Item Proposed	November 2018
NISO Information Creation and Curation Committee Approval	November 2018
NISO Voting Member approval	December 2018
Working Group Roster Formed & Approved	January 2019
Working Group Work	February–November 2019
Proposed Draft for Trial Use & Comment	December 2019-February 2020
Final Draft for Ballot	April 2020
Approved NISO standard sent to ANSI for ANS approval	June 2020

Funding

At the moment, we have some commitment from ASME, ASTM, DIN Software, IEEE, and XSB.