

# CORES

## Standards Interoperability Forum

### Discussion paper

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## 1. The context

On 18 November 2002, the CORES Project will hold a meeting among several Standards-Developing Organizations (SDOs) that are regarded as maintenance authorities for metadata elements. A few related umbrella organizations and registry-building activities will attend as observers. The meeting will be hosted by the European Committee for Standardization (CEN) in Brussels. The goal of this meeting will be to seek agreement on common principles that could facilitate semantic interoperability among the standards represented at the meeting and among semantic metadata standards generally.

This is an ambitious goal for a dozen or so participants representing such a broad spectrum of user communities meeting together for the first time for just one day. We would therefore like to focus the meeting on a set of propositions related to the identification of metadata elements in a Web environment.

A common agreement on how metadata elements can be uniquely identified and cited would be a useful first step towards the development of mapping infrastructures and conversion services. In the questionnaire responses over the past few months this was generally acknowledged as a common need, so we have reason to hope the group will be able to reach some consensus on this issue within the time-frame.

If this consensus seems achievable, we will aim by the end of the day to define a practical plan for consolidating that consensus in the weeks following. If consensus seems elusive, we will focus on achieving a common understanding of why this is the case.

## 2. Strawman propositions for discussion

Discussion will focus on four propositions, each stated in a form to be embraced, qualified, or rejected (with reasons) from the standpoint of a particular standards community. Each participant will have ten minutes to present comments before the floor is opened to general debate. Questionnaire participants who cannot attend in person may have comments presented on their behalf. The propositions are:

- 2.1. Our standard has "elements" -- atomic units of meaning comparable to elements of other standards. In principle, these elements are mappable to elements in other standards.
- 2.2. Our elements are identified in a citable way within the framework of our own standard. In principle, we would be willing to identify our elements in a more generalized form shared by other standards as well.
- 2.3. Specifically, we would be willing to identify our elements with Uniform Resource Identifiers (URIs). (The mechanics of this are discussed in Section 3 below.)
- 2.4. We are willing to articulate and publish specific policies regarding the semantic stability, persistence, and maintenance of the elements to which we assign URIs.

### 3. Using URIs to identify metadata elements

Identifying metadata elements in citable ways within the Web environment has been a key architectural goal of the World Wide Web Consortium. The following thoughts on the use of URIs as identifiers paraphrase input from Dan Brickley of W3C:

- 3.1. Since the syntax of URIs (IETF RFC 2396) is a superset of the identifier syntaxes used in URLs and URNs, using URIs to identify metadata elements allows us to anticipate future developments (for example, with URNs) without creating a dependency on them. Terms used in the RDF and XML specifications (e.g., 'class' and 'property') are identified with URIs, allowing W3C itself to explore a variety of URI-based strategies for managing metadata terms in the longer term.
- 3.2. Web architecture distinguishes between the abstract resource named by a URI reference such as <http://purl.org/dc/terms/audience> and the content that can be obtained by de-referencing such an identifier over the Web. Technologies such as content negotiation can serve up metadata elements in a variety of representations. It is useful, although not required, for element identifiers to de-reference to a publicly accessible XML document that describes a set of elements -- for human and/or machine consumption -- with regard to provenance, management, and status.
- 3.3. When offering metadata vocabularies to the Web community, it is important to be clear about the status and expected future management of URI-named elements. Minimally, it is both polite and sensible to encourage others to use your identifiers only if you make some commitment to their continued deployability. In the case of DNS-based identifiers, for example, one should take care not to let their registration lapse. In the case of HTTP-based identifiers, care should be taken to ensure that Web requests against that URI are serviced. Details of the format of the document returned are less important than the primary concern that vocabulary identifiers be deployed with care and not neglected once they get deployed in public ally shared instance data.

## 4. Potential issues for follow-up

At the close of the day, we will ask whether this event should be followed up by further meetings. Here are some topics that could provide bases for further dialogue or collaboration:

Attributes of metadata elements. If we can agree that elements are identified by namespace URIs, can we also agree that they should have names and definitions in natural language? Should we try to agree on more comprehensive sets of attributes for describing elements?

Publication of authoritative schemas. Should we seek to define shared expectations about the content to which namespace URIs should resolve when de-referenced on the Web?

Shared data models. Agreeing that we all have "elements" arguably constitutes a first small step towards a shared data model. Should we try to agree on how our standards relate to ontology efforts that differentiate in specific and well-defined ways between resources, agents, events, and the like?

Application profiles. Many standards communities have developed a notion of "profile" or "application profile" for declaring how a standard is adapted, constrained, or extended for use in a particular domain or application. Should forms and conventions for doing so be shared across different standards communities?

Formal namespace registry. Should we establish a shared mechanism for declaring formally supported namespace identifiers? What sort of governance structures would such a registry imply?

An ongoing Standards Forum. Should the organizations participating in this meeting pursue cooperation with further meetings, or in a more formal framework?