

# ISO/IEC JTC 1/SC 32 N 0320

Date: 1999-05-27

REPLACES: --

<p style="text-align: center;"><b>ISO/IEC JTC 1/SC 32</b></p> <p style="text-align: center;"><b>Data Management and Interchange</b></p> <p style="text-align: center;"><b>Secretariat: United States of America (ANSI)</b> <b>Administered by Pacific Northwest National Laboratory on behalf of ANSI</b></p>
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<b>DOCUMENT TYPE</b>	Proposed NP (proposal under review by WG or SC)
<b>TITLE</b>	Proposal for Technical Report on ISO/IEC 11179 Metadata Registry Content
<b>SOURCE</b>	SC 32/WG 2
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Douglas Mann, Secretariat, ISO/IEC JTC 1/SC 32

Pacific Northwest National Laboratory \*, 901 D Street, SW., Suite 900, Washington, DC, 20024-2115,  
United States of America

Telephone: +1 703 575 2114; Facsimile: +1 703 681 9180; E-mail: [MannD@battelle.org](mailto:MannD@battelle.org)

\*Pacific Northwest National Laboratory (PNL) administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI

**PROPOSAL FOR A NEW WORK ITEM**

**JTC1/SC32 N0320**

Date of presentation of proposal:  
1999-05-27

Proposer:  
ISO/IEC JTC 1/SC 32

Secretariat: SC32  
National Body

ISO/IEC JTC 1 N **XXXX**

A **proposal for a new work item** shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.

**Presentation of the proposal** - to be completed by the proposer Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

**Title**  
Technical Report on ISO/IEC 11179 Metadata Registry Content

**Scope** (and field of application)  
See attached.

**Purpose and justification**  
See attached

**Programme of work**

If the proposed new work item is approved , which of the following document(s) is (are) expected to be developed?  
\_\_\_ a single International Standard more than one International Standard (expected number: ..... )  
\_\_\_ a multi-part International Standard consisting of ..... parts  
\_\_\_ an amendment or amendments to the following International Standard(s) .....  
\_Y\_ a technical report , type .....

**Relevant documents to be considered**  
ISO/IEC 11179, Parts 1-6

**Cooperation and liaison**  
None

**Preparatory work offered with target date(s)**  
A draft exists as JTC1/SC32 N0262.

**Signature:** Larry A. Fitzwater

Will the service of a maintenance agency or registration authority be required? .....No.....

Are there any known requirements for coding? .....No.....

Does the proposed standard concern known patented items? .....No.....

**Comments and recommendations of the JTC 1 Secretariat** - attach a separate page as an annex, if necessary

**Comments with respect to the proposal in general, and recommendations thereon:**  
It is proposed to assign this new item to JTC 1/SC XX

**Voting on the proposal** - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

**Date of circulation:**  
YYYY-MM-DD

**Closing date for voting:**  
YYY-MM-DD

**Signature of JTC 1 Secretary:**  
Lisa A. Rajchel

## Scope and Justification

The exchange of metadata between ISO/IEC 11179 metadata registries depends not only on registry software that conforms to the standard, but also on metadata contents that are compatible between registries. While the standard has provisions for data element specification and registration, there are pragmatic issues pertaining to populating the registries with content. Based on the experiences of organizations that are implementing the standard, a technical report to explore content issues could help current and future users.

ISO/IEC 11179, Part 3 and extensions proposed to it in a related New Work Item, have concentrated on the basic attributes of data elements. Much of the work done to date is for the "abstract" level, not "application" level data elements. Well-formed data elements and their domains can be recorded in a metadata registry as "models" for potential reuse. Additional attributes may be required to record essential facts about how a data element is used in an application. Some potential attributes include "purpose for which data is collected", "statistical methodology used in data collection" and other potential data quality attributes. What other attributes are required? There is a need to address the attributes that should be documented at the application level. This will make use of the standard's extensibility, since all application level attributes cannot be established in advance.

The proposed revision of ISO/IEC 11179, Part 3, models a data element (DE) and its associated data element concept (DEC). A data element consists of the data element concept plus its representation. Some questions raised in the process of implementing registries concern this structure. Creation of an application data element frequently requires additional qualification of the object class and/or property. Does this creation of an application element always cause the creation of an application data element concept? Does the qualified concept inherit meaning from the standard concept to which it is related, and is there an adequate place in the current scheme to store this relationship? How are application DEC's distinguished from other DEC's or is there a need to make such a distinction? These are examples of topics, which might be explored in a document addressing content consistency among registry implementations.

When a standard data element is created, its value domain is specified. A number of related application elements may be created that are related to this standard element by particularizing the value domain in different ways. The resulting data element's domains might be further constrained to produce still more data elements. How are these relationships to be recorded?

Conceptualization and articulation of rules and relationships in the creation of object classes, properties, data element concepts and data elements are needed. Explication of the various possible levels of data elements and data element concepts and their relationships would greatly assist in the creation of shareable, well-formed data. Relationship and inheritance from the most abstract data element to the most concrete application data element needs to be specified. Reuse of data value domains should be enabled and regularized. A technical report to clarify use and content in data registries is proposed to address these issues.