

ISO/IEC JTC 1/SC 32 N 1794

Date: 2008-09-15

REPLACES: —

<p style="text-align: center;">ISO/IEC JTC 1/SC 32</p> <p style="text-align: center;">Data Management and Interchange</p> <p style="text-align: center;">Secretariat: United States of America (ANSI) Administered by Farance Inc. on behalf of ANSI</p>
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DOCUMENT TYPE	Summary of Voting/Table of Replies
TITLE	Summary of Voting on 32N1786 ISO/IEC CD 19763-3 Information technology - Metamodel framework for interoperability (MFI) Part 3: Metamodel for ontology registration 2nd Edition
SOURCE	SC32 Secretariat
PROJECT NUMBER	1.32.22.02.03.00
STATUS	WG2 is requested to resolve the comments. The document did not obtain substantial support.
REFERENCES	
ACTION ID.	ACT
REQUESTED ACTION	
DUE DATE	
Number of Pages	14
LANGUAGE USED	English
DISTRIBUTION	P & L Members SC Chair WG Conveners and Secretaries

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ISO/IEC JTC 1/SC 32 N1794

Summary of Voting on Document SC 32 N 1786

Title: ISO/IEC CD 19763-3 Information technology - Metamodel framework for interoperability (MFI) Part 3: Metamodel for ontology registration 2nd Edition

Project: 1.32.22.02.03.00

“P” Member	Approval	Approval with Comments	Disapproval with Comments	Abstention with Comments
Australia				
Belgium				
Brazil				
Canada			1	
China	1			
Czech Republic				
Egypt				
Finland				
Germany				1
Japan			1	
Kazakhstan				
Korea, Republic of			1	
Portugal				
Sweden				1
United Kingdom				
United States			1	
Total “P”	1		4	2
“O” Member				
Austria				
Denmark				
France				
Italy				
Netherlands, The				
Norway				
Russian Federation				
Switzerland				
Total “O”				

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COMMENTS:

Canada

No. See attached comments.

Germany

Abstain. Lack of expertise.

Japan

No. See attached comments.

Korea

No. See attached comments.

Sweden

Abstain. Lack of interest.

United States

No. See attached comments.

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of comment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
CA 01	Introduction	3 rd para	Te	The introduction states that Ontology is a key issue in integration among autonomous web based applications. How is this a key issue? What role does Ontology play in this scenario?	None provided with comment.	
CA 02	Introduction	3 rd para	Ed	Introduction contains definitions for Ontology. Definitions do not belong in the Introduction	Remove the sentence beginning: "Ontology is a description..." to the end of the paragraph. The second sentence removed could be added as a note to the definition in 4.1.2.	
CA 03	Introduction	4 th para	Ed	Time sensitive material on OMG and its activities does not belong in a standard	Delete 4 th para	
CA 04	1. Scope	1 st para	Te	2 nd sentence of para 1 of Scope refers to 'evolution information'. This term is not defined in 4.1.	Add appropriate definitions to clause 4.1. See also comments CA 08 and CA 31.	
CA 05	1. Scope	2 nd para	Te	Para 2 of scope implies that the metamodel promotes interoperation among application systems.	Explain how interoperation (or interoperability?) is accomplished using the metamodel.	
CA 06	1. Scope	Figure 1	Te	It is not clear what the figure is meant to portray. The division of boxed rectangles, the shadings, the icons and symbols, the rectangles, and arrows need to be explained, in particular what is flowing across the arrows.	None provided with comment.	
CA 07	2.1 General		Te	The reference to 'some part of the metamodel' for conformance is too vague; particularly since the subsequent specifications of levels 1 and 2 are referring to supposedly complete metamodels.	None provided with comment.	
CA 45	4.1 Terms and definitions		Te	The document uses the term 'administrative information' but does not define it. (Nor does 11179-3.)	Add an appropriate definition to clause 4.1, and add it to 11179-3 Ed 3 as well, or find an alternate term that is already defined.	
CA 08	4.1 Terms and definitions		Te	The document uses the term Evolution Information but does not define it. Nor does it define the associate verb 'evolve(s)'.	Add appropriate definitions to clause 4.1. See also comments CA 04 and CA 31.	

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2 Type of comment: ge = general te = technical ed = editorial

NOTE Columns 1, 2, 4, 5 are compulsory.

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
CA 09	4.1 Terms and definitions		Ed	The terms in this clause are not in alphabetical order.	Order the terms alphabetically.	
CA 47	4.1 Terms and definitions		Ed	Modelling terms used in this document need to be defined by reference to standards from which they are taken (e.g. 11179, UML): E.g. class, metaclass, attribute, association, superclass, datatype, multiplicity.	Add appropriate definitions.	
CA 10	4.1.1 Universe of discourse		Te	The term Universe of Discourse is already defined in ISO TR9007:1987 as: "The collection of all objects (entities) that ever have been, are, or ever will be in a selected portion of a real world or postulated world of interest that is being described." Why is a new definition being introduced?	Reference the definition from TR 9007.	
CA 39	4.1.8 symbol		Ed	ISO guidelines specify not to use leading articles	Remove initial 'the'	
CA 40	4.1.8 symbol		Te	Further clarification of the definition is requested.	None provided.	
CA 41	4.1.9 logical symbol		Te	Further clarification of the definition is requested.	None provided.	
CA 42	4.1.10		Te	Further clarification of the definition is requested.	None provided.	
CA 11	4.2 Abbreviated terms		Ed	The following abbreviations used within the document are not listed in 4.2.: OWL, RDF, UML, XML	Add all missing abbreviated terms and their expansions.	
CA 44	4.2 Abbreviated terms		Ed	The terms are not ordered.	Order the terms alphabetically.	
CA 12	4.2 Abbreviated terms	MFI Ontology Registration	Ed	The abbreviated term is MFI.	Replace the entry for 'MFI Ontology Registration' by an entry for MFI – Metamodel Framework for Interoperability	

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CA 43	4.2 Abbreviated terms	MDR	Ed	MDR comes from ISO/IEC 11179-3	Add a reference to ISO/IEC 11179-3.	
CA 13	5	All	Ed	The manner of presentation of the description of the metamodel in 19763-2, 19763-3 and 11179-3 is different in each case.	WG2 should choose a preferred manner of presentation for metamodels, and use it consistently throughout their standards. In particular, CD 19763-3 edition 2 and CD 11179-3 edition 3 should be made consistent. Ballot comments on CD 11179-3 have already proposed changes to the presentation of that document. The same approach should be adopted for 19763.	
CA 14	5.1 Overview of MFI Ontology registration	2 nd para	Ed	The English grammar can be improved.	Replace: '...package is to register...' by: 'package is used to register' Replace: 'irrelevant to' by: 'independent of'	
CA 46	5.1 Overview of MFI Ontology registration	3 rd para	Ed	The English grammar can be improved.	Replace: '...package is to register...' by: 'package is used to register'	
CA 15	5.1 Overview of MFI Ontology registration	3 rd para	Ed	Typographical errors	'mataclasses' should be 'metaclasses'. Correct the spelling of: Ontology_Component_Evolution_Information & Ontology_Component	
CA 16	5.2 Overview of Basic_Model package	All	Te	We find the overview paragraphs contain a lot of valuable information and are helpful. However, these paragraphs also contain embedded definitions and constraints which are absent from the real clause 5.4 <i>Basic_Model package</i> .	The overview should be simplified and the definitions and constraints should be defined in the main body of clause 5.4 <i>Basic_Model package</i> where they belong and are currently missing.	
CA 17	5.2 Overview of Basic_Model package	Figure 3	Te	Cardinalities and roles are missing from the metamodel in Figure 3. The practice of explicitly defining cardinalities ensures that the absence of a cardinality constraint is not to be construed as being missed as an oversight and	Add cardinalities and roles to Figure 3. See also CA-24.	

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				being defaulted to 1. Roles are necessary to define the associative character of the associations.		
CA 18	5.2 and 5.3	Figure 3 & Figure 4	Te	The UML diagrams need to be validated. Additional comments may be needed to address the consistency and integrity of these 2 diagrams.	None provided with comment. Additional input may be provided to the ballot resolution meeting.	
CA 19	5.3 Overview of Evolution_Information_Model package	All	Te	We find the overview paragraphs contain a lot of valuable information and are helpful. However, these paragraphs also contain embedded definitions and constraints which are absent from the real clause 5.5 <i>Evolution_Information_Model package</i> .	The overview should be simplified and the definitions and constraints be defined in the main body of clause 5.5 <i>Evolution_Information_Model package</i> where they belong and are currently missing.	
CA 20	5.3 Overview of Evolution_Information_Model package	Figure 4	Te	Cardinalities and roles are missing from the metamodel in Figure 4. The practice of explicitly defining cardinalities ensures that the absence of a cardinality constraint is not to be construed as being missed as an oversight and being defaulted to 1. Roles are necessary to define the associative character of the associations.	Add cardinalities and roles to Figure 4. See also CA-34.	
CA 21	5.4 Basic_Model Package	All	Te	Most of the definitions being provided in the clauses 5.2 and 5.4, are circular and don't add any new meaning or, weakly portray the natural language sentence readout of the UML modeling construct. E.g. 5.4.4 <i>Ontology_Whole</i> has a definition "Ontology_Whole is an abstract metaclass that is a SuperClass of Registered_Ontology_Whole and Unregistered_Ontology_Whole."	The definitions need to clearly define each term, and should conform to the rules specified in 11179-4.	
CA 22	5.4 Basic_Model Package	All	Te	In most cases the text description of the metaclasses repeats the UML semantics weakly, i.e. The sentence does not have a complete constraint set defined in the sentence.	All semantics represented in the UML must be specified in the English text as well.	
CA 23	5.4 Basic_Model Package	All	Ed	There is no easy way to reference constraints within the sub-clause	Either name or number the constraints to allow them to be referenced.	
CA	5.4 Basic_Model	All	Te	Cardinalities and roles are missing from the metamodel in Figure 3 (see CA 17) and from the corresponding text in	Add cardinalities and roles to clause 5.4.	

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24	Package			clause 5.4.		
CA 25	5.4 Basic Model Package		Te	Cleanup of UML diagrams – notation. The UML diagrams Figures 3 and Figures 4 define attributes by Association, while the in-line attributes are defined only in the text and not in the diagram.	See CA 13.	
CA 26	5.4.3 Ontology Language		Te	The attribute 'name' for the class Ontology_Language states that "...it is advisable that its value should be one of the values in column "name" of Table 1 at Annex C". To ensure semantic equivalence and integrity of the ontology descriptive language identifiers, 'name' must be drawn from an identified reference list.	In addition to 'name', we should specify a namespace, with a specified way of referencing Annex C Table 1 as the chosen namespace (e.g. identified as: ISO/IEC 19763-3:200n). See also CA 36.	
CA 27	5.4.4 Ontology Whole		Ed	The constraint for Ontology_Whole refers to a non-existing attribute 'URI'.	Change 'URI' to 'IRI'.	
CA 28	5.4.6 Unregistered Ontology Whole	Superclass	Ed	The superclass name is misspelled.	Change 'Ontolohy_Whole' to 'Ontology_Whole'	
CA 29	5.4.7 Reference Ontology Whole	Superclass	Ed	The superclass name is misspelled.	Change 'Registered_Ontolohy_Whole' to 'Registered_Ontology_Whole'	
CA 30	5.4.8 Local Ontology Whole	Superclass	Ed	The superclass name is misspelled.	Change 'Registered_Ontolohy_Whole' to 'Registered_Ontology_Whole'	
CA 31	5.5 Evolution Information Model package	All	Te	Most of the definitions being provided in the clauses 5.3 and 5.5, are circular and don't add any new meaning or, weakly portray the natural language sentence readout of the UML modelling construct. E.g. from 5.3: Evolution_Information is an abstract metaclass that is a superclass on Ontology_Whole_Evolution_Information. This tells us nothing about the purpose of the class, nor	The definitions need to clearly define each term, and should conform to the rules specified in 11179-4. Note that the definition of the concept "Evolution Information" (e.g. "information that records the relationship among versions of the model being	

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				anything about what Evolution Information is. Also, looking at the attributes in clause 5.5, suggests Evolution information is nothing but version history.	described") belongs in clause 4.1, while the definition of the class 'Evolution Information' belongs in clause 5.5.	
CA 32	5.5 Evolution_Information_Model package	All	Te	In most cases the text description of the metaclasses repeats the UML semantics weakly, i.e. The sentence does not have a complete constraint set defined in the sentence.	All semantics represented in the UML must be specified in the English text as well.	
CA 33	5.5 Evolution_Information_Model package	All	Ed	There is no easy way to reference constraints within the sub-clause	Either name or number the constraints to allow them to be references.	
CA 34	5.5 Evolution_Information_Model package	All	Te	Cardinalities and roles are missing from the metamodel in Figure 4 (see CA 20) and from the corresponding text in clause 5.5.	Add cardinalities and roles to clause 5.5.	
CA 35	5.5.1 Evolution_Information	1 st para	Ed	Evolution_Information is misspelled.	Change 'Evolution_Informatio' to 'Evolution_Information'	
CA 36	Annex C	Table 1	Te	Any ontology language referenced should be explicitly identified, not referenced as 'Other'.	Remove 'Other' from Table 1. If it is necessary to reference a language not listed in Table 1, then a separate namespace should be established within which the language can be identified.	
CA 37	Annex C	Table 1	Te	CogNIAM, NIAM, ORM, and SBVR can be used to specify ontologies.	Add CogNIAM, NIAM, ORM, and SBVR to Table 1.	
CA 38	All		Ge	Fix any other problems discovered after ballot closes.	None provided.	

END

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ISO/IEC JTC1/SC32/WG2

9 September 2008

SEQ #	Cmnt ID	See Also	Severity	Reference	Description	Addressed By
ISO/IEC CD 19763-3						
001	JPN-P01-001		3-Minor Technical	5.5.2 <i>Ontology_Whole_Evolution_Information</i> 5.5.3 <i>Ontology_Component_Evolution_Information</i> 5.5.4 <i>Ontology_Atomic_Construct_Evolution_Information</i>	The multiplicity of refrence "previousVersion" and "newVersion" should be changed to 1..* from 1..1. Rationale MFI Part3 Ed2 should be able to handle both folk-type evolutions and versions merging since MFI Part3 Ed2 should be as much general as possible.	

End of Paper

Korea Comments on SC32 N1786 19763-3:2008(E)

Template for comments and secretariat observations

Date: 2008-09-03

Document: ISO/IEC 19763-3:2008(E)

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table /Note (e.g. Table 1)	Type of com- ment 2	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
KR	5.5.1	Line 1	ed	Evolution_Informatio is an abstract metaclass that is a SuperClass of Ontology_whole_Evolution		
KR	General		te	Evolution_Information should be considered as a subclass of Administered_Item		
KR	General		te	The Evolution_Information only involves version evolution, we think that is not enough. Please consider to refer to the machnism of version control technology		
KR	General		te	Since more and more contents are involved, the examples present by table are hard to follow. Please consider to use graph to present the examples.		
KR	General		te	By far the example ontology in 19763-3 is quite simple. A general ontology, such as an OWL ontology, involves much complicated component. Please try to use more complicated ontology to drive the 2Ed development		

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0	1	2	(3)	4	5	(6)	(7)
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1	US	3	par 4	te	19763-2 does not appear to be “indispensable” to this standard	Remove normative reference to 19763-2	
2	US	4.1.1		te	Definition of universe of discourse differs substantially from that in 24707	Drop this term from 19763-3, as it is only used in the defn of ontology, which would be clearer without it (see comment 3)	
3	US	4.1.2		te	Definition of ontology in terms of universe of discourse makes it difficult to interpret semantics of combinations of ontologies. Different ontologies do not describe separate universes, they partially describe a (potentially) common universe.	Change defn to: description, in a language that a computer can process, of a range of concrete or abstract things that have been, are, or ever might be.	
4	US	5	throughout	ed	use of “designates” is confusing, as it does not match use of that term in TC37 standards, and in ISO 11179.	Change to “represents”	
5	US	5.1	par 2	ed	irrelevant to is not the right English for what is intended	Change “irrelevant to” to “independently of”	
6	US	5.1	par 2	ed	administrative information “describes” an ontology, so “describe” is not a good contrasting term for contents of an ontology	Change “describe” to “are used to express”	
7	US	5.2	par 2	ed	“a language that describes” is unclear English	Change to “the language used to express”	
8	US	5.2	throughout	te	It would be more clear to only have authoritativeLevel for Local items, and less different from edition 1 model	Replace Authoritative_Item with Local_Item, whose subclasses would be Local_Ontology_Whole, Local_Ontology_Component and Local_Ontology_Atomic_Construct; and adjust model and text for consists_of and uses associations accordingly.	
9	US	5.2	par 4	ed	since only	Change text accordingly	

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page 1 of 3

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0	1	2	(3)	4	5	(6)	(7)
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					Unregistered_Ontology_Wholes may be imported, no reference needs to be made to authoritativeLevel in relation to imports		
10	US	5.3, 5.5		ed	names of Evolution_Information subclasses are unwieldy	Remove “_Information” from the names of the subclasses—it is superfluous (every thing in a registry is information). Also rename Evolution_Information to Item_Evolution, to have parallel construction	
11	US	5.4.2		te	see comment 8	see comment 8	
12	US	5.4.3		ed	“descriptive” is underspecific (see also comment 6)	Change “descriptive” to “expression”	
13	US	5.4.5		te	rules for consists_of can be made more clear and explicit in the model by pushing it down to the subclasses, as it was in edition 1 (see also comment 8)	move consists_of down to subclasses	
14	US	5.4.5		te	description of “sameAs” is unclear, as is the need for it	either clarify the description, or remove it from the model	
15	US	5.4.1 0		te	rules for uses can be made more clear and explicit in the model by pushing it down to the subclasses, as it was in edition 1 (see also comment 8)	move uses down to subclasses	
16	US	5.4.1 0		te	authoritativeLevel constraint on sameAs does not make sense, if it is a symmetric association	drop authoritativeLevel constraint on sameAs	
17	US	5.4.1 0		te	cardinality constraint on sameAs does not make sense	change cardinality to 0..*	
18	US	5.4.1 1		te	“evolvesFrom” constraint does not belong in this package	move “evolvesFrom” constraint to clause 5.5	
19	US	5.4.1 4		te	cardinality constraint on sameAs does not make sense	change cardinality to 0..*	

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page 2 of 3

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20	US	5.4.1 4		te	authoritativeLevel constraint on sameAs does not make sense, if it is a symmetric association	drop authoritativeLevel constraint on sameAs	
21	US	5.5.3		te	can't represent addition or deletion of sentence	change multiplicity of previousVersion and newVersion to 0..1, with constraint only that they can't both be empty	
22	US	5.5.3		te	it's not clear whether/how to represent merging or splitting of sentences	clarify whether this is supported, and how	
23	US	5.5.4		te	it's not clear whether/how to represent merging or splitting of atomic constructs	clarify whether this is supported, and how	