

# ISO/IEC JTC 1/SC 32 N 1962

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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 Farance Inc. on behalf of ANSI</b></p>
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<b>DOCUMENT TYPE</b>	Disposition of Comments
<b>TITLE</b>	Disposition of comments in 32N1867 Summary of Voting on FCD 19763-3 Information technology - Metamodel framework for interoperability (MFI) Part 3: Metamodel for ontology registration 2nd Edition
<b>SOURCE</b>	WG2 - Keqing HE & masao OKABE - project editors
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MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
CA 01	0-All		Ge	This standard is positioned within the 19763 family of standards, and references the 19763-1 framework document, but otherwise seems to have no dependence on other parts of 19763. 19763-1 states that 19763-3 is dependent on 19763-2, but that is not the case. All the classes in the 19763-3 metamodel are sub-typed from Administered_Item, which is taken from 11179-3. Therefore, this standard seems to have a closer affinity to 11179 than to 19763.	We recommend that the study period on WG2 Standards consider and explain the rationale for positioning this document in 19763 (perhaps because other parts of 19763 will rely on it?).The discrepancy with the 19763-1 Framework Model should be addressed.	No change will be made.  CA01 and GB01 are addressed as issues of the MDR, MFI harmonization study period.
CA 02	0-Introduction	para 1	Ed	The first paragraph of the introduction references e-Business and business transactions, but the rest of the document makes no mention of them, nor are there any normative references to ISO/IEC standards for e-Business.	Delete the first paragraph of the Introduction.	Accepted. Also the second paragraph is removed.
CA 03	2.1 General	para 1	Ed	The first sentence needs to be clarified. The reference to 'the metamodel or the metamodeles' (sic), makes it sound as if we don't know how many are specified. Since there are two metamodels specified, we cannot refer to the metamodel in the singular.	Change 'the metamodel or the metamodeles'to: 'one or both of the metamodels'.	Change 'the metamodel or the metamodeles' to 'one or both of the metamodels'.

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
CA 04	4.1.1.1	definition	Te	<p>Ontology is defined as: 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. We have the following comments on this definition</p> <p>1) description seems too weak a term, if this is to be computer processable. formal specification would be better.</p> <p>2) range does not seem appropriate. set would be better.</p> <p>3) we should indicate how the set of concepts is bounded, e.g. by some domain of knowledge or universe of discourse.</p> <p>4) the specification should not just be about the things, but also about the relationships among them.</p> <p>5) language that a computer can process is rather vague. 'language' if not qualified usually means 'natural (i.e. human) language, which does not lend itself well to formal specifications.</p>	<p>We present two alternatives:</p> <p>1) Applying the individual changes proposed at the left: formal specification of a set of concrete or abstract things, and the relationships among them, in a specified domain of knowledge or universe of discourse.</p> <p>We could optionally add a Note: Note: the formal specification should be computer processable.</p> <p>2) Tom Gruber has revised his definition to: a set of representational primitives with which to model a domain of knowledge or discourse  <a href="http://tomgruber.org/writing/ontology-definition-2007.htm">http://tomgruber.org/writing/ontology-definition-2007.htm</a>            Unfortunately, he does not define 'representational primitive'.</p>	<p>The definition is changed to "specification of concrete or abstract things, and the relationships among them, in a prescribed domain of knowledge".</p> <p>And the following note is added.</p> <p>Note The specification should be computer processable</p>
CA 05	5.4 & 5.5	throughout	Ed	In many of the tables, text wraps to the next line at arbitrary places in a word.	Adjust how the text wraps to the next line so that it occurs at a natural breakpoint for a word. E.g. in 5.4.1 lessThanOrEqualTo Authorative_Extent	Accepted. Also "_" at the first character of a line is moved to the last character at the previous line.
CA 06	5.4 & 5.5	throughout	Ed	In many instances, the description of a class refers to attributes which are not immediately apparent, because they are inherited from a superclass (e.g. "consistsOf" in the Constraint in 5.4.7).	Identify the source of inherited attributes. E.g. in 5.4.7, by inserting "(inherited from Registered_Ontology_Whole)" after "consistsOf".	Accepted.
CA 07	5.4.1	all	Te	The concept of 'authoritative extent' needs to be defined. What does it mean? The whole purpose of Authoritative Extent needs to be explained.	None provided.	'authoritative extent' is defined as "extent that indicates authoritativeness" at 3.1.2.5. Also notes and an example are added there.
CA 08	5.4.2	Note	Ed	There is a typo in the second line	Local_Otology_Whole s/b Local_Ontology_Whole.	Done. Thank you!
CA 09	5.4.15	line 2	Ed	There is a typo in the second line	Regestered_ s/b Registered_	Done. Thank you!
CA 10	5.5.3	line 1	Ed	There is a typo in the first line	Registetere_ s/b Registered_	Done. Thank you!

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
CA 11	5.5.4	line 1	Ed	There is a typo in the first line	Registetered_ s/b Registered_	Done. Thank you!
GB 01	General		te	This revised part of 19763 is relatively simple compared to part 2. It sets out a simple high level metamodel for registering ontologies and tracking their evolution. It does not attempt to fully represent ontologies, merely register external ontologies and track their evolution. The metamodel is so abstract that it can be used to refer to probably all specific ontology metamodels. Detailed ontology languages are outside the scope of the standard. By itself the part doesn't seem very useful, but when combined with specific ontology standards there could be some value. But this revised part does not reference part 2 of this standard which describes the core model for 19763 so it is not clear why this part is still a part of 19763. It is not clear whether ontology is different enough from other kinds of metadata to warrant a separate part of 19763 rather than use the facilities provided in 11179 (and it is noted that 11179-3 is a normative reference).	Revise this draft part so that it is dependent on 19763-2 or cancel this part and incorporate the facilities in 11179.	No change will be made. CA01 and GB01 are addressed as issues of the MDR, MFI harmonization study period.  Some rationales: An ontology can characterise metadata, but they are different. For example, dc:title itself is a metadata, but to characterise dc:title, we need an ontology for dc:title (or DC Metadata Element Set). The most basic structure of 19763-3 is <i>Ontology_Whole</i> (ontology), <i>Ontology_Component</i> (sentence, statement, axiom, fact) and <i>Ontology_Atomic_Construct</i> (symbol, name) to register an ontology, independent of its language, which is already specified in 19763-3 Ed1 published in 2007. The current 11179-3 does not have this structure and is not enough to register an ontology generically.
GB 02	General		ed	There are a number of areas where the English could be improved. For example, the use of the word "inevitable" in the first sentence of the second paragraph of the Scope clause is almost certainly inappropriate.		inevitable => indispensable
GB 03	2.1	1	ed	Spelling of "metamodels" is incorrect.	Change "metamodels" to "metamodels".	Done. Thank you!

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
GB 04	2.1	1	ed	On first reading, the paragraph appears to be vague or ambiguous.	Change the paragraph to: "An implementation claiming conformance to this part of ISO/IEC 19763 shall support one or more of the metamodels specified in this part of ISO/IEC 19763. Depending on the level and degree of conformance claimed, it either may or shall not support extensions.	Change 'the metamodel or the metamodels' to 'one or both of the metamodels'.
GB 05	4.1.1.1		ed	The text of this and a small number of other definitions is terminated with a full stop (period), but most other definitions are not so terminated.	Terminate all or no definitions with full stops.	Full stops have been deleted. Thank you!
GB 06	4.1.2.2		ed	The word "composes" usually implies the combination of a number of elements, whereas in this definition it is being used to refer to a single element.	Replace "composes" with "forms", or simply "is".	"composes" => "is"
GB 07	5.4, 5.5		ed	The layout of the class specifications differs from that used in other parts of this standard.	Adopt a common layout for class specifications across all parts of the 19763 standard.	No change will be made. GB07 is addressed as an issue of the MDR, MFI harmonization study period.
GB 08	5.4.1		te	The class definition in 5.4.1 is inconsistent with Figure 3. The recursive association in Figure 3 is shown as a many-to-many association (0..* at both ends) yet only one reference is shown in 5.4.1. For a many-to-many association two references are required.	Add second reference.	No change will be made since a many-to-many association does not necessarily require two references since this is MOF-based model and not a relational model and the the multiplicity of the opposite direction is specified by a constraint.
GB 09	5.4.3		te	The Note takes the form of a requirement, contrary to the provisions of part 2 of the ISO/IEC Directives. It also repeats part of the description of the "name" attribute. Further, both the note and the description reference an Informative Annex in the requirement.	If there is indeed a requirement intended, promote the relevant text and the referenced annex into normative elements of the document. Otherwise, revise the Note to say that Annex A suggests a means of deciding the value of the attribute and delete the relevant section of the description of the "name" attribute.	Note is changed to "Annex A suggests a means of deciding the value of the attribute", and "The value has to be chosen in accordance with Annex A" is deleted from the description of "name".
GB 10	5.4.5		te	The constraint is applied to the wrong class.	Reword and move to 5.5.2 (Ontology_Whole_Evolution)	No change will be made since this constraint specifies a multiplicity constraints of an inverse reference.

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
GB 11	5.4.6		te	The constraint is applied to the wrong class.	Reword and move to 5.4.5 (Registered_Ontology_Whole)	No change will be made since this constraint specifies a multiplicity constraints of an inverse reference.
GB 12	5.4.7		ed	In the constraint definition "consistsOf" is a reference, not an attribute.	Delete "attribute", insert "reference"	Done. Thank you!
GB 13	5.4.7 and Figure 3		te	A more appropriate name for this class is "Reference_Registered_Ontology_Whole".	Rename	Accepted
GB 14	5.4.7, 5.4.8 and Figure 3		te	The constraints are poorly worded and their purpose was not clear until the model had been studied for some time. The intent could be made clearer by replacing the "consistsOf" association between "Registered_Ontology_Whole" and "Registered_Ontology_Component" with individual associations from "Reference_Ontology_Whole" and "Local_Ontology_Whole" to the relevant subclasses of "Registered_Ontology_Component".	Replace the existing ambiguous association with explicit unambiguous associations and make corresponding textual amendments to the class definitions.	Reference "consistsOf" at 5.4.5 Registered_Ontology_Whole is divided to three references, that is, "consistsOfReference" from Reference_Ontology_Whole to Reference_Ontology_Component, "consistsOfReference" from Local_Ontology_Whole to Reference_Ontology_Component, and "consistsOfLocal" from Local_Ontology_Whole to Local_Ontology_Component. The constarint of 5.4.7 Reference_Ontology_Whole is removed. Similar changes are made to reference "use" of 5.4.10 Registered_Ontology_Component.
GB 15	5.4.8 and Figure 3		te	A more appropriate name for this class is "Local_Registered_Ontology_Whole".	Rename	Accepted
GB 16	5.4.9		ed	Typo – there is a "tt" at the end of the class description.	Amend	Done. Thank you!
GB 17	5.4.9		te	In the constraint the phrase "and to identify the corresponding sentence" is a rationale for the constraint and not part of the constraint.	Remove the phrase.	The constraint is divided to the following two constraints: The value of attribute "sentenceIdentifier" prefixed by the value of attribute "namespace" has to be unique in this metaclass .The value of attribute "sentenceIdentifier" prefixed by the value of attribute "namespace" has toand to identify the corresponding sentence.
GB 18	5.4.10		ed	Typo – "sentence" is incorrectly spelt in the description of "sameAs"	Amend	Done. Thank you!
GB 19	5.4.10		te	The class definition in 5.4.10 is inconsistent with Figure 3. The recursive association in Figure 3 is shown as a many-to-many association (0..* at both ends) yet only one reference is shown in 5.4.10. For a many-to-many association two references are required.	Add second reference.	No change will be made since a many-to-many association does not necessarily require two references since this is MOF-based model and not a relational model and the the multiplicity of the opposite direction is specified by a constraint.
GB 20	5.4.10		te	The constraint is applied to the wrong class.	Reword and move to 5.5.3 (Ontology_Component_Evolution)	No change will be made since this constraint specifies a multiplicity constraints of an inverse reference.

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
GB 21	5.4.11 and Figure 3		te	A more appropriate name for this class is "Reference_Registered_Ontology_Component".	Rename	Accepted
GB 22	5.4.11, 5.4.12 and Figure 3		te	The constraints would be unnecessary if the "consistsOf" association between "Registered_Ontology_Whole" and "Registered_Ontology_Component" is replaced as described above and the "uses" association between "Registered_Ontology_Component" and "Ontology_Atomic_Construct" is similarly replaced by explicit associations between the subclasses.	Replace the existing ambiguous associations with explicit unambiguous associations and make corresponding textual amendments to the class definitions.	No change will be made since all the constraints are necessary even if GB14 is accepted. As for the constraints of 5.4.12, a) roughly means that a local ontology has to have at least one its own sentence at the same authoritative level. b) roughly means that a local ontology can only reuse other sentences whose authoritative level is higher or equal to it. c) roughly means that an "sameAs" association has to be directed from the one with lower authoritative level to the one with higher authoritative level. The constraints of 5.4.11 are similar and simpler.
GB 23	5.4.12 and Figure 3		te	A more appropriate name for this class is "Local_Registered_Ontology_Component".	Rename	Accepted
GB 24	5.4.14		te	The class definition in 5.4.14 is inconsistent with Figure 3. The recursive association in Figure 3 is shown as a many-to-many association (0..* at both ends) yet only one reference is shown in 5.4.14. For a many-to-many association two references are required.	Add second reference.	No change will be made since a many-to-many association does not necessarily require two references since this is MOF-based model and not a relational model and the the multiplicity of the opposite direction is specified by a constraint.
GB 25	5.4.14		te	The constraint is applied to the wrong class.	Reword and move to 5.5.4 (Ontology_Atomic_Construct_Evolution)	No change will be made since this constraint specifies a multiplicity constraints of an inverse reference.
GB 26	5.4.16 and Figure 3		te	A more appropriate name for this class is "Reference_Registered_Ontology_Atomic_Construct".	Rename	Accepted
GB 27	5.4.16, 5.4.17 and Figure 3		te	The constraints would be unnecessary if the "uses" association between "Registered_Ontology_Component" and "Ontology_Atomic_Construct" is replaced as described above.	Replace the existing ambiguous associations with explicit unambiguous associations and make corresponding textual amendments to the class definitions.	No change will be made since all the constraints are necessary even if GB14 is accepted.
GB 28	5.4.17 and Figure 3		te	A more appropriate name for this class is "Local_Registered_Ontology_Atomic_Construct".	Rename	Accepted
GB 29	5.5.2		ed	In the description of "isComposedOf" the opening name should be "Ontology_Component_Evolutions" since the reference is 0..*.	Amend	Accepted. In the case of 1:* , also.

MB	Clause etc.	Para.	Type	Comment (justification for change) by the NB	Proposed change by the NB	Disposition
GB 30	5.5.2		ed	In the description of "isComposedOf" there is a "y" missing in "Registered_Ontolog_Components".	Amend to read "Registered_Ontology_Components"	Done. Thank you!
GB 31	5.5.2		ed	In the description of "isComposedOf" the word "composes" is used incorrectly.	Replace with "forms"	Accepted. Also, "isComposedOf" => "isFromedFrom"
GB 32	5.5.3		ed	In the description of "isComposedOf" the opening name should be "Ontology_Atomic_Construct_Evolutions" since the reference is 0..*.	Amend	Accepted. In the case of 1:* , also.
GB 33	5.5.3		ed	In the description of "isComposedOf" there is a "y" missing in "Registered_Ontolog_Components" but it should read "Registered_Ontology_Atomic_Constructs".	Amend to read "Registered_Ontology_Atomic_Constructs"	Done. Thank you!
GB 34	5.5.3		ed	In the description of "isComposedOf" the word "composes" is used incorrectly.	Replace with "forms"	Accepted. Also, "isComposedOf" => "isFromedFrom"
GB 35	5.5.3		ed	In the description of "isComposedOf" the last name should be "Ontology_Component_Evolution" and not "Ontology_Whole_Evolution".	Amend	Done. Thank you!
**		1	ed	The scope shall consist of a series of statements of fact describing the content of the document. It should not provide general commentary about the subject.	Delete first 2 sentences of second paragraph or move them to the introduction.	The first two sentences are modified and are moved to the Introduction..
**	3, 4.1		ed	Giving year of publication of normative references excludes any amendments to or revisions of these documents. This is especially relevant for ISO/IEC 11179-3, which is under revision.	Give undated references in order to reference the latest edition of each document. Otherwise, note that ISO/IEC 19763-3 will need to be revised when the dated references are superseded.	All the normative references are changed to dated.
**	Annex A		ed	Publicly available ISO documents that are referenced informatively shall be listed in the bibliography.	Include ISO/IEC 13250 and ISO/IEC 24707 in the bibliography.	ISO/IEC 13250 and ISO/IEC 24707 and others related to Annex A have been added to the bibliography. See Table A..1 revised.