

# ISO/IEC JTC 1/SC 32 N 1847

Date: 2009-03-10

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 32N1743 Summary of Voting on FCD 19763-4 Information technology - Metamodel framework for interoperability (MFI) Part 4: Metamodel for model mapping
<b>SOURCE</b>	WG2 - Toshiaki Kurokawa and Keqing He - Project Editors
<b>PROJECT NUMBER</b>	1.32.22.01.04.00
<b>STATUS</b>	Disposition of comments in SoV 32N1743 (comments on FCD 19763-4 ballot 32N1680). This accompanies FCD2 19763-4 sent to NBs for 4 month letter ballot
<b>REFERENCES</b>	
<b>ACTION ID.</b>	FYI
<b>REQUESTED ACTION</b>	
<b>DUE DATE</b>	
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1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of comment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted

## RESOLUTION OF COMMENTS FROM FCD 19763-4

### Template for comments and secretariat observations

Template for comments and secretariat observations					Date: 2008-01-15	Document: ISO/IEC CD2 19763-4
1	2	(3)	4	5	(6)	(7)
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CA 01	3.1.2	definition of 'pattern'	te	The definition is still unclear, even though it was revised in response to a CDN comment on CD2. The problematic text has not been changed. The definition is: "expression that describes the 'shape' of an object it will be matched against". What does the 'it refer to? Can we find a better term than 'shape'?	Clarify the definition. Possible resolution, though we are not sure this is what is meant: "expression that describes the 'shape' of an object to which other objects may be matched to determine similarity" Would 'structure' be better than 'shape'? (Editor's note) Editor's proposal: expression that describes the 'shape' of an object which other objects may be matched to determine a part of a model	Accepted Complete
CA 02	3.2.2	definition of mandatory	ed	The definition is taken from 11179-3:2003 and NOTE 1 refers to three obligation statuses. However, this standard uses only two. The corresponding note in the definition of OPTIONAL has already been changed.	In NOTE 1, change 'three' to 'two'.	Accepted Complete
CA 03	3.2.10	definition of 'optiona'	ed	In Note 1, 'obligation' is misspelled.		Accepted Complete
CA 04	4.1	Figure 1	te	Figure 1 uses terminology from MOF (e.g. M1 Layer, M2 Layer), but these are not explained.	Include definitions of MOF terms in clause 3. (Editor's note) Change Figure1 as not mentioning the MOF Layer Add the MOF terms.	Accepted Complete

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

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CA 05	4.3	Figure 2 and text	te	Figure 2 and text throughout this clause uses the abbreviations: - MM-M; M-V but these are not explained	Include explanations of these abbreviations in clause 3, and the first time they are used in clause 4.  (Editor's note) Change abbreviation such as MM-M to Metamodel-Model M-V to Model-Value See also GB14	Accepted Complete
CA 06	4.4.2	MM-M Rule	te	Para. 2 refers to 'MOF Extents'. What are these? Where and how are they to be used? And under what criteria or conditions?	Include the term and definition in clause 3, and some explanation in this clause of how it is relevant here.  (Editor's note) Add the term and definition as follows 3.2.24 MOF extent context in which an element in a set of elements in a set can be identified. NOTE1 An element may be a member of zero or more extents. NOTE2 An extent is not an element, it is part of a MOF capability.	Accepted Complete
CA 07	4.4.5	Figure 3	te	Figure 3 uses the terms: <b>MM Level, M Level and V Level</b> , but these terms are not defined.	Add the terms and their definitions to clause 3.  (Editor's note) Change abbreviation such as MM Level to Metamodel Leve M Level to Model Level V Level to Value Level See also GB14	Accepted Complete
CA 08	4.4.5	Figure 3	te	There is a legend of <b>arrow symbols</b> below Figure 3, but there is no explanation as to what they mean, nor do the symbols appear in the Figure.	Either explain these or remove them.  (Editor's note) Change Figure3 for more clear diagram	Accepted Complete

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CA 09	4.4.5	Figure 4	te	There is a legend of <b>arrow symbols</b> below Figure 4, but there is no explanation as to what they mean, nor do the symbols appear in the Figure.	Either explain these or remove them. (Editor's note) Change Figure3 for more clear diagram	Accepted Complete
CA 10	4.4.6	Figure 5	te	There is a legend of <b>arrow symbols</b> below Figure 5, but there is no explanation as to what they mean, nor do the symbols appear in the Figure.	Either explain these or remove them. (Editor's note) Change Figure3 for more clear diagram	Accepted Complete
CA 11	4.4.6	Figure 6	te	There is a legend of <b>arrow symbols</b> below Figure 6, but there is no explanation as to what they mean, nor do the symbols appear in the Figure.	Either explain these or remove them. (Editor's note) Change Figure3 for more clear diagram	Accepted Complete
GB 01	Introduction	Line 3	ed	Incorrect spelling	"endeavor" should be "endeavour"	Accepted Complete
GB 02	2		te	There are still some concerns with the normative references included in this clause. According to ISO/IEC Directives this clause should include everything that is referenced in such a way that you need, in principle anyway, to consult it in order to implement or apply this standard. Although all the documents listed in this clause are cited in the in the body of the document, some are only cited informatively. Many of the citations use an incorrect format, for example, using "UML" instead of "ISO/IEC 19501".	Review the list of normative references in this clause and then cite them correctly in the body of the document. (Editor's note) Change "UML" into "ISO/IEC 19501"	Accepted Complete
GB 03	3		te	It would be useful to have a definition for " <b>computation</b> ".	Add a definition for "computation". (Editor's note) Add the term definition as follws: "computation" procedure of calculating and determining objects as a value by mathematical or logical	Accepted Complete

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GB 04	3.1.1; 3.1.5; 3.1.6		ed	These three definitions are circular (ie they all rely on each other).	<p>methods</p> <p>Provide 'non-circular' definitions. (<i>Editor's note</i>)</p> <p><b>3.1.1 mapping</b> potentially directed transformation implementation</p> <p><b>3.1.5 relation relationship</b> multi-directional transformation specification NOTE Relations are not executable in the sense that they are unable to create or alter a model; they can, however, check two or more models for consistency against one another.</p> <p><b>3.1.6 transformation</b> process of automatic generation of a target model from a source model according to a relation or mapping definition NOTE Transformation is the umbrella term for relation and mapping.</p> <p><i>Rewording:</i></p> <p><b>3.2.39 transformation</b> process of automatic generation of a target</p>	Accepted Complete
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					<b>model</b> from a source <b>model</b> according to a generation rule definition  NOTE <b>Transformation</b> is the umbrella term for <b>relation</b> and <b>mapping</b> .	
GB 05	3.1.4		te	Is ' <b>model</b> ' used in the same way as in the title of the standard? It is unclear.	Enhance the definition. <i>(Editor's note)</i> Rewroding: abstraction of a physical or conceptual system with a certain purpose	Accepted Complete
GB 06	3.1.5		ed	" <b>relation</b> " and " <b>relationship</b> " are shown as synonyms in this definition but (1) they normally have distinct meanings in the data/database community and (2) they are used inconsistently in the body of the document.	Use "relationship" consistently throughout the document. <i>(Editor's note)</i> In the document, the terms "relation" and "relationship" are used according to MOF QVT terminology.	Not Accepted.
GB 07	3.2.10	NOTE 1	ed	Spelling error.	"bligation" should be "obligation".	Accepted Complete
GB 08	3.3		ed	Numbering error - numbering changes from "3.3.n" to "3.2.n" after "3.3.8"	Amend. <i>(Editor's note)</i> see ISO04	Accepted Complete
GB 09	3.3		te	Not every abbreviation used in the body of the standard is included in this clause.	Include all abbreviations. <i>(Editor's note)</i> Some symbols without definition are used in the examples of the Annex C. Add the word in the diagram of Annex C.	Accepted Complete

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GB 10	4.1	Figure 1	te	The <b>layer</b> concept needs explanation.	Add explanation. (Editor's note) Add the term definition in clause 4.	Accepted Complete
GB 11	4.2	Line 7	ed	"The MFI Model Mapping is shown as a series of UML Class diagrams , ..."	Revise wording. (Editor's note) Rewording "The MFI Model Mapping is shown as a UML Class diagram, with each Class being described as follows"	Accepted Complete
GB 12	4.2	Attribute specification	te	This shows that <b>datatypes</b> are to be specified for all attributes. Clause 4.1 states that the model described in this standard is a conceptual and abstract model. Datatypes are a physical concept and should not be included in a conceptual or abstract model.	Remove datatypes throughout the whole document. (Editor's note) Datatype is needed for MOF diagram and interoperability	Not accepted
GB 13	4.3	Line 1	ed	"Figure 2 illustrates a package of MFI model Mapping."	Amend to read " Figure 2 illustrates the package of Model Mapping within the Metamodel Framework for Interoperability."	Accepted Complete
GB 14	4.3	Line 4 et seq	te	Abbreviations such as " <b>MM-M</b> " need explanation. In fact, as these are names of classes in a conceptual model abbreviations should not be used at all and the names should be fully spelt out.	Spell out names.	Accepted Complete
GB 15	4.3	Figure 2	te	If this figure is an accurate depiction of the concepts in the standard, it would appear that the concepts are unlikely to support accurate and realistic mapping between models. There are at least two concerns.  (1) This implies that when mapping models there is always a one-to-one mapping between 'model instances', whereas in reality mapping is usually many-to-many.	Revise the Figure and the remainder of Clause 4. (Editor's note) Change metamodel as follows: ModelConcept to ModelDomainProfile	Accepted Complete

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				(2) As shown in the Figure it would be possible to mismatch "Model Instances" and "Model Concepts".  These are serious errors that require the complete revision of the body of the document.	ModelInstances to ModelComponentSet  Delete subclasses of LevePair and Transformation as follows:  Unify MM-M rule and M-V rule into LevelPair Rule.  Unify MM-M Transformation and M-V Transformation into Tranformation.	
GB 16	4.4.1	Line 1	ed	Spelling error.	"abstrcut" should be "abstract".	Accepted Complete
GB 17	4.4.1	Superclass	ed	"Administered item (from MFI-Core)"	Remove "(from MFI-Core)" - since "Administered item" is defined in 3.2.1, the qualification is not needed here.  (Editor's note)  MFI-Core is not correct; it should be MDR-ByMOF as follows.  "Administered Item (from MDR-ByMOF)"  "(from MDR-ByMOF)" is specified as a external namespace.	NOT Accepted
GB 18	4.4.1	Line 11	te	"The identifier of sets of transformations rules"  This description does not appear correct for an attribute called "Name" (singular) in a class called "LevelPair Rule" (also singular).	Revise.  (Editor's note)  Rewording as:  "An identifier of the transformation rule"	Accepted Complete
GB 19	4.4.1	Table 1	te	Clause 4.1 states that the model described in this standard is a conceptual and abstract model. Codes are a physical concept and should not be included in a conceptual or abstract model.	Remove the code column.	Accepted Complete

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GB 20	4.4.1	Table 1	te	Is this set of valid values fixed for all time, or called it <b>expand</b> ? It looks as if it is fixed, but it should probably be allowed to expand.	Clarify the status of this set. <i>(Editor's note)</i> The extension is defined in the conformance clause 2.	Not Accepted
GB 21	4.4.1	Table 2	te	Clause 4.1 states that the model described in this standard is a conceptual and abstract model. <b>Codes</b> are a physical concept and should not be included in a conceptual or abstract model.	Remove the code column.	Accepted Complete
GB 22	4.4.1	Table 2	ed	Table <b>cell contents</b> are incorrectly justified.	Use 'left justified' for all table cells other the heading rows.	Accepted Complete
GB 23	4.4.1	Table 3, equivalence	ed	"... return the true/false".	Amend to read "... return true or false".	Accepted Complete
GB 24	4.4.1	Attributes	te	" <b>ruleDefinition</b> " This name does not match the proposed contents, which are a reference to a rule.	Change the name so that it is more appropriate. <i>(editor's note)</i> Change "ruleDefinition" into "ruleDefinitionURI"	Accepted Complete
GB 25	4.4.2	Attributes	te	These are all inherited from the superclass and should not be redefined here.	Delete attributes.	Accepted Complete
GB 26	4.4.2	Attributes	te	Statements such as "upperRuleType shall be the code of "Relationship"" are constraints and should be listed in that section.	Move all such constraints to the appropriate constraints section. <i>(editor's note)</i> Change the clause and section configurations.	Accepted Complete
GB 27	4.4.2	Constraints	te	"targetUpper may be in MM level and targetLower shall be in M level" - the use of "may" is inappropriate in a constraint specification.	Amend "may" to "shall".	Accepted Complete
GB 28	4.4.3	Attributes	te	These are all inherited from the superclass and should not be redefined here.	Delete attributes.	Accepted Complete

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GB 29	4.4.3	Attributes	te	Statements such as "lowerRuleType shall be the code of 'Computation'" are constraints and should be listed in that section.	Move all such constraints to the appropriate constraints section. <i>(editor's note)</i> Change the clause and section configurations.	Accepted Complete
GB 30	4.4.4	Table 4	te	Clause 4.1 states that the model described in this standard is a conceptual and abstract model. Codes are a physical concept and should not be included in a conceptual or abstract model.	Remove the code column. <i>(editor's note)</i> Change 'code' into 'type'	Accepted Complete
GB 31	4.4.4	Table 4	te	Is this set of valid values fixed for all time, or called it expand? It looks as if it is fixed, but it should probably be allowed to expand.	Clarify the status of this set. <i>(Editor's note)</i> The extension is defined in the conformance clause.	Not Accepted
GB 32	4.4.5	Attributes	te	"name" and "kind" are inherited from the superclass and should not be redefined here.	Delete "name" and "kind".	Accepted Complete
GB 33	4.4.5	Attributes	te	"mm-m-map" is a reference and not an attribute.	Move "mm-m-map" to the references section.	Accepted Complete
GB 34	4.4.5	Table 5	te	Clause 4.1 states that the model described in this standard is a conceptual and abstract model. Codes are a physical concept and should not be included in a conceptual or abstract model.	Remove the code column.	Accepted Complete
GB 35	4.4.5	Table 5	te	Is this set of valid values fixed for all time, or called it expand? It looks as if it is fixed, but it should probably be allowed to expand.	Clarify the status of this set. <i>(Editor's note)</i> The extension is defined in the conformance clause.	Not Accepted
GB 36	4.4.5	Figure 3	ed	It is very unclear what this figure is trying to show.	Add some descriptive text. <i>(Editor's note)</i> Change mapping model and redraw the figures	Accepted Complete

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GB 37	4.4.5	Figure 4	ed	It is very unclear what this figure is trying to show.	Add some descriptive text. (Editor's note) Change mapping model and redraw the figures	Accepted Complete
GB 38	4.4.6	Attributes	te	"name" and "kind" are inherited from the superclass and should not be redefined here.	Delete "name" and "kind".	Accepted Complete
GB 39	4.4.6	Attributes	te	"m-v-map" is a reference and not an attribute.	Move "m-v-map" to the references section.	Accepted Complete
GB 40	4.4.6	Table 6	te	Clause 4.1 states that the model described in this standard is a conceptual and abstract model. Codes are a physical concept and should not be included in a conceptual or abstract model.	Remove the code column.	Accepted Complete
GB 41	4.4.6	Table 6	te	Is this set of valid values fixed for all time, or called it expand? It looks as if it is fixed, but it should probably be allowed to expand.	Clarify the status of this set. (Editor's note) The extension is defined in the conformance clause.	Not Accepted
GB 42	4.4.6	Figure 5	ed	It is very unclear what this figure is trying to show.	Add some descriptive text. (Editor's note) Change mapping model and redraw the figures	Accepted Complete
GB 43	4.4.6	Figure 6	ed	It is very unclear what this figure is trying to show.	Add some descriptive text. (Editor's note) Change mapping model and redraw the figures	Accepted Complete
GB 44	5		ed	This clause begins with a hanging paragraph. There should be a level 2 heading immediately after "5 Conformance".	Add heading.	Accepted Complete
GB 45	5	Second sentence	ed	The "must" should be "shall".	Amend. (Editor's note) This sentence is not requirement. It only gives the	Not Accepted

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					possibility.	
GB 46	5	Second sentence	te	It should be made clear how this requirement will be tested.	Add clarification. (Editor's note) This sentence is not requirement. It only gives the possibility.	Not Accepted
GB 47	Annex A		te	The heading is "Transformation Languages" yet in the body of the text they are often referred to as "Transformation Description Languages"	Use consistent terminology. (Editor's note) Delete 'description' in "Transformation Description Languages"	Accepted Complete
GB 48	Annex A		ed	This Annex is very difficult to read and it is unclear what purpose it is trying to achieve. It needs substantial rewriting.	Rewrite complete Annex.	Accepted Complete
GB 49	Annex A		te	"Simply stated, a model compiler is a program that reads a transformation definition written in one formal language - the source model - and translates it into an equivalent model in another metamodel - the target model."  (1) It is unclear why the word "compiler" has been used.  (2) The implication of this sentence is that a metamodel is a formal language. Whilst that is almost certainly correct, consistent terminology should be used.	Rewrite. (Editor's note) Transformation engine is analogy like a compiler of programming language. In programming language, Java compiler is defined as follows; Java metamodel provides the syntax. Java expression (program) is a source model. Java compiled byte code is a target model. Java byte machine is defined by a target metamodel. MOF QVT is like; QVT metamodel provides the syntax. QVT expression (transformation rule) is a source model QVT compiled expression is target model. QVT compiled expression is defined by a target	Accepted Complete

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					metamodel.  Metamodel defines an abstract syntax for describing model and provides a formal language. In MOF QVT, QVT metamodel defines a formal transformation language. The model, QVT expression is a source model and the result of transformation is target model written by a formal language of another metamodel.  So, rewording,  A model compiler is a program that read a transformation rule expression written in one formal language (defined by metamodel) –source model- and translate it into an equivalent model in another metamodel –target model.	
GB 50	Annex B		ed	This Annex is very difficult to read and it is unclear what purpose it is trying to achieve. It needs substantial rewriting, including the addition of text to explain Figure B1.	Rewrite complete Annex. <i>(Editor's note)</i> Rewrite the text and figure as more simply	Accepted. Complete
GB 51	Annex C		ed	This Annex is very difficult to read and it is unclear what purpose it is trying to achieve. It needs substantial rewriting, including the addition of text to explain Figures C1 to C8.	Rewrite complete Annex. <i>(Editor's note)</i> Redraw the Figures as based on the clause 5.  Add text to explain Figures C1 to C7.  (delete the PIM/PSM examples, because many spaces are needed to explain)	Accepted Complete
US0 1	Clause 3		ed	The clause numbering has an error. Some abbreviations are numbered 3.2.x, after the clause starts at 3.3. This is from 3.2.9 – 3.2.26.	Renummer to 3.3.x <i>(Editor's note)</i> Abbreviated terms are not numbered (see ISO04)	Accepted Complete

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MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of comment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted

US02	Clause 3.3		ed	Is the bold face the correct style for the expansion of the abbreviations?	Check ISO directive. <i>(Editor's note)</i> Change the bold face to non-bold face according to ISO directive	Accepted Complete
US03	Clause 4.2	1	ed	The words "conforming MOF standards" in the following sentence is ambiguous. "The MFI Model Mapping registry model is specified using Administered Items as defined in the Metadata Registry (MDR), and conforming Meta Object Facility (MOF) standards." Do you mean to exclude standards that are not conforming to MOF? Or something else?	Reword to clarify. <i>(Editor's note)</i> Reword as follows; The MFI Model Mapping registry model is specified using the MOF and Administered Items as defined in the MDR. The MOF metamodel constructs used include classes, relationships, association classes, attributes and references. These terms are defined in 4.1, and their model is described in Annex B of ISO/IEC 19763-2.	Accepted Complete
ISO01	2		ed	Documents listed in Clause 2 shall be referenced "normatively" elsewhere in the document, ie in a way that makes them indispensable to the application of the document.	Redraft document to refer to the following documents in a normative manner or move them to the Bibliography: <b>ISO/IEC 19763-2</b> <b>ISO/IEC 11179-3:2003</b> <b>ISO/IEC 19501:2005</b> <b>ISO/IEC 19502:2005</b> <b>ISO/IEC 19503: 2005</b> <b>ISO/IEC 20944 (which part?)</b>  NB Ensure that ISO/IEC 19763-2 and ISO/IEC 20944 have progressed to at least FDIS stage if they are to be used as normative references, since it is only then	Accepted Complete

1 MB = Member body (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

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

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1	2	(3)	4	5	(6)	(7)
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					that they become publicly available documents.	
** ISO 02	2		ed	Incorrect title given for ISO/IEC 11179-3.	Change last element of Part 3 title to "Registry metamodel and basic attributes"	Accepted <a href="#">Complete</a>
** ISO 03	Introduction, 4, 4.2, 5.1 & 5.2		ed	Document incorrectly references itself as "this standard".	Except in the introductory paragraphs to Clauses 2 & 3, reference the document throughout as "this part of ISO/IEC 19763". Reference the whole series as "ISO/IEC 19763" and other parts as "ISO/IEC 19763-n".	Accepted  Complete
* ISO 04 *	3.3		ed	Abbreviated terms are not numbered in International Standards. Caps not necessary and used inconsistently.	Redraft as follows:  BIE      business information entity CC        core component  etc.	Accepted  <a href="#">Complete</a>
** ISO 05	5		ed	Clause 2 is the conformance clause in International Standards.	Insert this clause after the Scope and renumber subsequent clauses.	Accepted  Complete

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