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 Software & Systems Engineering  
 Secretariat: CANADA (SCC)

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**Revised 2003-12-02**

**Document Type** Letter Ballot Summary  
**Title** FDAM to ISO/IEC 15414 - Information Technology - Open Distributed Processing - Reference Model – Enterprise Language – Amendment 1  
**Source** JTC1/SC7 Secretariat  
**Project** FPDAM 15414  
**Status** Draft  
**References** N2897  
**Action ID** FYI or ACT  
**Distribution** SC7\_AG; P, O & L Members  
**Medium** Acrobat  
**No. of Pages** 34  
**Note** Updated to reflect late votes from Italy and the USA

**TABLE OF VOTING AND COMMENTS RECEIVED**

<b>“P” members</b>	<b>Approve</b>	<b>Disapprove</b>	<b>Abstain</b>	<b>Comments</b>	<b>Not voting</b>
Australia	x				
Belgium					X
Brazil					X
Canada	x				
China	x				
Czech Republic	x				
Denmark					X
Finland					X
France	x			x	
Germany	x				
Hungary					X
Ireland					X
Israel					X
Italy	x				
Japan		x		x	
Korea	x				
Netherlands	x				
Portugal					X
Romania					X
Singapore					X
South Africa					X
Spain	x			x	
Sweden					X
Switzerland			x		
UK		x		x	
Ukraine					X
USA	x				
Thailand					X
<b>TOTAL (28</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>14</b>

**LETTER BALLOT SUMMARY**

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**“O” and “L” members commenting:**

Country / Liaison				Comments	

Country	Comments



Vote on FDAM 15414	
Date of circulation 2003-07-14	Reference number ISO/JTC 1/SC 7 N2897
Closing date 2003-11-14	

ISO/JTC 1/SC 7 Committee Title <b>Software and Systems Engineering</b>  Secretariat: Standards Council of Canada (SCC)	Circulated to P-members of the committee for voting  Please return all votes and comments in electronic form directly to the SC 7 Secretariat by the due date indicated.
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ISO/IEC JTC1/SC7

Title: FDAM to ISO/IEC 15414 | ITU T Recommendation X.911 - Information Technology—Open Distributed Processing - Reference Model—Enterprise Language.

Vote:

~~APPROVAL OF THE DRAFT AS PRESENTED~~

APPROVAL OF THE DRAFT WITH COMMENTS AS GIVEN ON THE ATTACHED

general:

technical:

editorial:

~~DISAPPROVAL OF THE DRAFT FOR REASONS ON THE ATTACHED~~

Acceptance of these reasons and appropriate changes in the text will change our vote to approval

~~ABSTENTION (FOR REASONS BELOW):~~

P-member voting:

National Body (Acronym)

AFNOR

Date:

YYYY-MM-DD

2003-11-13

Submitted by:

Your Name

Frédéric MAILLARD

NOTE: do NOT submit this form for email voting. Simply type your vote into an email message (with comments where applicable in the completed attached Excel Spreadsheet) and send to [Secretariat@jtc1-sc7.org](mailto:Secretariat@jtc1-sc7.org).

			<b>Balloted</b>	<b>document:</b>	ISO/IEC JTC 1	FDAM 15414	
				<b>Vote:</b>	Approve, with Comments		
<b>National Body ID</b>	<b>ID</b>	<b>Category (TH, TL, E, G)</b>	<b>Clause, Sub-clause</b>	<b>Paragraph, Figure, Table</b>	<b>Comment and rationale</b>	<b>Proposed new text</b>	
FRANCE	1	E	3.1.2		Some terms used in the ISO/IEC15414 standard are not in the list (see 11.4.1).	Add “cluster”, “capsule”, “nucleus”, “operation”, “stream”	
	2	TH	7.1	lines 23-32	Community interaction is described in 7.3.2	Remove or move some of these lines to 7.3.2	
	3	E	Annex A	Page 22, lines 7-8	The note should be removed. To the question in the note we would reply that it is a model of the EL concepts, as said above the note	Remove the note	
	4	E	Annex A	Page 22, lines 17-19	System concepts should be explained before General concepts as shown in the diagrams in page 23	Put line 19 on System concepts before line 17 on General concepts	
	5	TL	Annex A	Page 22, line 20, page 23, line 7	These are community and behaviour concepts	Change the title of the diagram to “Community and behaviour concepts”	
	6	E	Annex A	Page 22, line 28	We would suggest that the notation used should be explicit	Add “These diagrams use a UML notation (and a UML tool called Objectteering)”.	
	7	TL	Annex A	Page 23, lines 3-4	We believe that, even though the definitions of Process and Step leave it insaid, a Step should not be shared by different Processes	Change the cardinality between Step and Process.	

National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
	8	TL	Annex A	Page 23, lines 3-4	We do not think that the association between Contract and Behaviour is needed. A Contract is specifies only one Objective and this Objective is met by different behaviours that are well specified as so	Remove the association between Contract and Behaviour
	9	TL	Annex A	Page 23, lines 3-4	Actor, Artefact, Resource and Interface Role are all Roles and this could be represented in a diagram.	Remove Interface Role from this diagram and add another diagram to Figure A.3 with the different kinds of Roles
	10	TL	Annex B	Page 25, lines 6-7	To the question in the note we reply that we consider this annex as very essential	Remove the note and keep the annex

		<b>Balloted</b>		<b>document:</b>	ISO/IEC JTC 1/SC 7 N2897 FPDAM 15414	
				<b>Vote:</b>	Disapprove (conditional)	
<b>National Body ID</b>	<b>ID</b>	<b>Category (TH, TL, E, G)</b>	<b>Clause, Sub-clause</b>	<b>Paragraph, Figure, Table</b>	<b>Comment and rationale</b>	<b>Proposed new text</b>
JP	1	E	0.2	line 10, page vi	Candidate audiences are proposed.	ODP system owners and users, including subject matter experts, and developers of those ODP systems, tools, and methodologies.
JP	2	TL	6.2	line 12-18, page 5	The term "community contract" appears in various places (10 times in main text, and 8 times in Annex), but the PDAM and the standard do not provide a definition for it.	Add the definition of "community contract" as follows. 6.2.3 community contract: An agreement governing community's behaviour (based on RM-ODP Part 2 11.2.1)
JP	3	E	7.1	line 6-9, page 7	The list does not cover all the major concepts in this standard. See line 10 and NOTE 2.	Add the following or delete this paragraph. - community in which ODP system is specified; - objective of the ODP system; - scope of the ODP system;
JP	4	TL	7.1 and 7.3.2	line 23-32, page 7 and line 19-24, page 9	Those two paragraphs try to describe the same thing in different way, which is confusing. Since Annex B is more in line with the latter description, it is suggested to delete the former text.	Delete line 23-32, page7, of 7.1.
JP	5	TL	7.3.1	line 1-8, page 9	The list misses inclusion of enterprise objects.	Add the following. - enterprise objects; - relationships between enterprise objects;
JP	6	E	7.3.2	line 23, page 9	A role, appearing twice on the same line, should be explicitly referred to as interface role.	Replace the bullet by the following. - an object, in fulfilling an interface role of one community, interacts with an object fulfilling an interface role in another community;

National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
JP	7	TL	7.6.3	line 11-13, page 11	"Change" has more meaning than those described here: - addition; - removal; - modification (could be considered as removal & addition at once)	Replace the bullet by the following. - addition of new rules to existing policies; - removal of rules from existing policies; - addition of new roles into the community; - removal of roles from the community; - addition of enterprise objects to the community; - removal of enterprise objects from the community; - addition of processes and/or steps to the community; - removal of processes and/or steps from the community
JP	8	E	7.6.4	like 19, page 11	typo	Replace "establishing behaviour" by "terminating behaviour."
JP	9	E	7.7	line 26-27, page 11	Those two sentences are redundant.	Remove a sentence from line 26.
JP	10	TL	Annex A	Figure A.1	1) The figure is missing. 2) Policy should also be one of enterprise model elements.	<pre> classDiagram     class ModelElement     class Policy     class Type     class Template     class Community     class EnterpriseObject     class Role     class Process     class Action      ModelElement &lt; -- Policy     ModelElement &lt; -- Type     ModelElement &lt; -- Template     ModelElement &lt; -- Community     ModelElement &lt; -- EnterpriseObject     ModelElement &lt; -- Role     ModelElement &lt; -- Process     ModelElement &lt; -- Action     </pre>
JP	11	TL	Annex A	Figure A2	To be consistent with general description of Enterprise Language, objective (purpose) and policy should be added.	<pre> graph TD     S[Scope of a system] --- of1[of] --- Sys[System]     OP[Objective Purpose] --- of2[of] --- Sys     Pol[Policy] --- of3[of] --- Sys     FA[Field of Application] --- of4[of] --- ES[Enterprise Specification]     ES --- of5[of] --- Sys     </pre>
JP	12	TL	Annex A	Figure A3	"Contract" specifies "Policy" and "Community" but there is no association between "Policy" and	Add the line between "Policy" and "Community" with role ends name "governs" and "governed"

National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
JP	13	TL	Annex A	Figure A4	1) "Contracting Party" is a party with additional characteristics. The association with "Party" may better be inheritance. 2) "Contracting Party" should be associated with a contract which binds contracting parties.	<pre> classDiagram     class Party     class ContractingParty     class Contract     Party &lt; -- ContractingParty     ContractingParty --- Contract             </pre>
JP	14	E	Annex B	B.1.6.3, line 15-34, page 33	The case numbers are not consistent with case numbers for community interaction pattern just before the paragraph.	Change the case number on line 15 from 1) to 1) and 2). Change the case number on line 17 from 2) to 3). Change the case number on line 22 from 3) to 4). Change "fourth case" on line 27 to "fifth case."
JP	15	E	B.1.6.5	line 51, page 33	typo	Add "in" before "our specification."
JP	16	E	B.1.6.5	line 2, page 34	typo	Remove "the" just before "There are ..."



**JP1            E            Page vi, 0.2 Overview and motivation, line 10**

**Rationale**

Candidate audiences are proposed.

**Proposal**

ODP system owners and users, including subject matter experts, and developers of those ODP systems, tools, and methodologies.

**JP2            TL            Page 5, 6.2 Community concepts, lines 12-18**

**Rationale**

The term "community contract" appears in various places (10 times in main text, and 8 times in Annex), but the PDAM and the standard do not provide a definition for it.

**Proposal**

Add the definition of "community contract" as follows.

6.2.3 community contract: An agreement governing community's behaviour (based on RM-ODP Part 2 11.2.1)

**JP3            E            Page 7, 7.1 Overall structure of an enterprise specification, line 6-9**

**Rationale**

The list does not cover all the major concepts in this standard. See line 10 and NOTE 2.

**Proposal**

Add the following or delete this paragraph.

- community in which ODP system is specified;
- objective of the ODP system;
- scope of the ODP system;

**JP4 TL Page 7, 7.1 Overall structure of an enterprise specification, line 23-32, and Page 9, 7.3.2 Relationship between communities, line 19-24**

**Rationale**

Those two paragraphs try to describe the same thing in different way, which is confusing. Since Annex B is more in line with the latter description, it is suggested to delete the former text.

**Proposal**

Delete line 23-32, page7, of 7.1.

**JP5 TL Page 9, 7.3.1 Community, line 1-8**

**Rationale**

The list misses inclusion of enterprise objects.

**Proposal**

Add the following.

- enterprise objects;
- relationships between enterprise objects;

**JP6 E Page 9, 7.3.2 Relationship between communities, line 23**

**Rationale**

A role, appearing twice on the same line, should be explicitly referred to as interface role.

**Proposal**

Replace the bullet by the following.

- an object, in fulfilling an interface role of one community, interacts with an object fulfilling an interface role in another community;

**JP7 TL Page 11, 7.6.3 Changes in a community, line 11-13**

**Rationale**

"Change" has more meaning than those described here:

- addition;

- removal;
- modification (could be considered as removal & addition at once)

### **Proposal**

Replace the bullet by the following.

- addition of new rules to existing policies;
- removal of rules from existing policies;
- addition of new roles into the community;
- removal of roles from the community;
- addition of enterprise objects to the community;
- removal of enterprise objects from the community;
- addition of processes and/or steps to the community;
- removal of processes and/or steps from the community

### **JP8 E Page 11, 7.6.4 Terminating a community, line 19**

#### **Rationale**

typo

#### **Proposal**

Replace "establishing behaviour" by "terminating behaviour."

### **JP9 E Page 11, 7.7 Objective rules, line 26-27**

#### **Rationale**

Those two sentences are redundant.

#### **Proposal**

Remove a sentence from line 26.

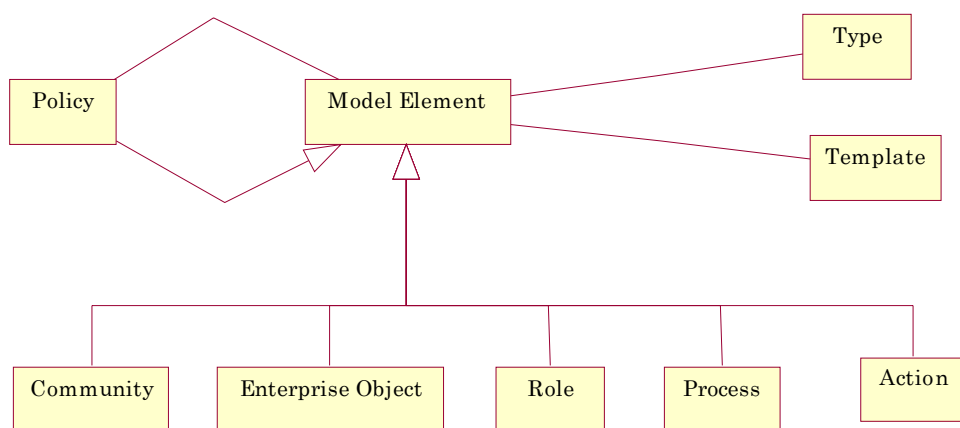
**JP10 TL Page 22, Annex A Figure A.1, line 28-29**

**Rationale**

- 1) The figure A.1 is missing.
- 2) Policy should also be one of enterprise model elements.

**Proposal**

Add the missing diagram with the following Model Element – Policy relationship.



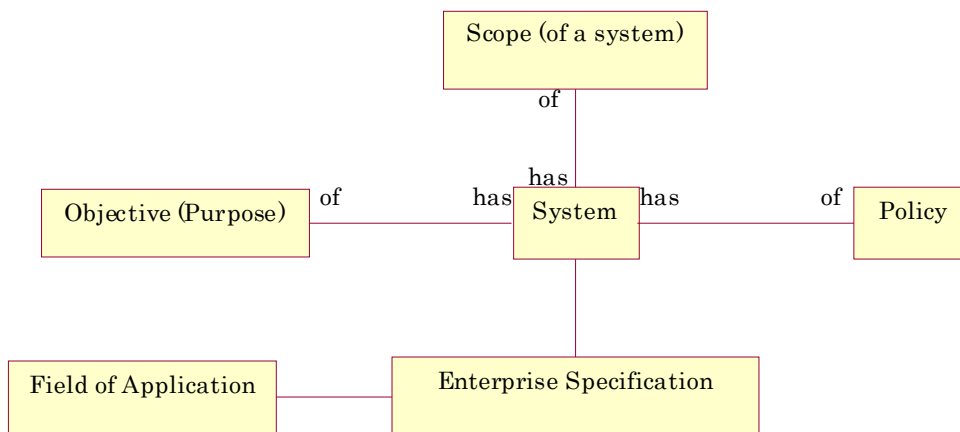
**JP11 TL Page 23, Annex A Figure A.2, line 1**

**Rationale**

To be consistent with general description of Enterprise Language, objective (purpose) and policy should be added.

**Proposal**

Add those elements to the diagram, like the one below.



**JP12 TL Page 23, Annex A Figure A.3, line 3-4**

**Rationale**

"Contract" specifies "Policy" and "Community" but there is no association between "Policy" and "Community."

**Proposal**

Add the line between "Policy" and "Community" with role ends name "governs" and "governed"

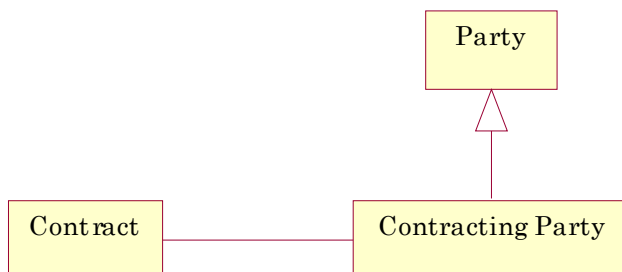
**JP13 TL Page 24, Annex A Figure A.4, line 1**

**Rationale**

- 1) "Contracting Party" is a party with additional characteristics. The association with "Party" may better be inheritance.
- 2) "Contracting Party" should be associated with a contract which binds contracting parties.

**Proposal**

Change the relevant part of the meta model into the one like below.



**JP14 E Page 33, Annex B.1.6.3 Relationship between communities, line 15-34**

**Rationale**

The case numbers are not consistent with case numbers for community interaction pattern just before the paragraph.

**Proposal**

Change the case number on line 15 from 1) to 1) and 2).

Change the case number on line 17 from 2) to 3).

Change the case number on line 22 from 3) to 4).

Change “fourth case” on line 27 to “fifth case.”

**JP15            E            Page 33, Annex B.1.6.5 Federation, line 51**

**Rationale**

typo

**Proposal**

Add "in" before "our specification."

**JP16            E            Page 34, Annex B.1.6.5 Federation, line 34**

**Rationale**

typo

**Proposal**

Remove "the" just before "There are ..."

		Balloted		document:		
		Vote:		ISO/IEC JTC 1/SC 7 N2897 FDAM 15414		
		Approve, Disapprove, Abstain				
National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
Spain	1	E	General	Format	The document is formatted using a centred vertical alignment. This produces strange page formatting (see, e.g. pages iii and 40).	Configure the document pages using a "top" vertical alignment.
Spain	2	E	Page 4, line 22	font size	The reference to Part 2 "[2-11.2.7]" is in a smaller font. This also happens in other parts of the document (e.g., in page 4, lines 36 and 37; page 5, line 44; etc.).	Check throughout the document that the sizes of the text fonts are correct.
Spain	3	E	Page 5, line 43	authorisation	The word "authorisation" appears as "authorization" (i.e., with "z") elsewhere in the document, apart from in the following three places (in which it appears as "authoriSation"): in page5, line 43; in the UML diagram shown in Figure A.5 in page 24 and in the index in page 40.	Use "authorization" all over the document, instead of "authoriSation".
Spain	4	TH	Page 7, lines 22-32	Interaction communities	The way in which communities can interact is described in 7.3.2. We feel that the text in 7.1 (i.e., the NOTE 4 in line 22, and lines 23-32 of page 7) describing the way in which interaction between communities can be represented should be removed from there, specially when the cases presented there are not the same as those described in 7.3.2.	Remove lines 22-32 from page 7 (of Clause 7.1). At most, a forward reference can be made, adding the following sentence after the sentence in line 21: "... The ways in which enterprise communities can interact is described in clause 7.3.2.
Spain	5	E	Page 9, lines 20-24 and 32-40	right margin of itemized lists	The right margin of the two lists in clause 7.3.2 seems to be out of bounds.	Fix the margins.
Spain	6	TL	Page 12, line 18	NOTE 2	The last sentence of NOTE 2 ("It may be necessary to use a combination of the two approaches") seems too strong.	Change the sentence to "Furthermore, a combination of the two approaches may also be
Spain	7	TL	Page 12, line 37	Creation and deletion of relationships between roles	The concept "relationship between roles" is not defined either in the RM-ODP, or in this EL standard. There are, however, several occurrences of the expression "relationship between roles" in this document. This is not a problem, since the normal English meaning of relationship can be applied in all of them (as a semantic connection between the roles, general enough to cover most of the possible kinds of relationships: it can be a subtype/supertype relationship, a client/server relationship, an interaction, etc.). However, the sentence in page 12, line 37 is different, since it talks about the "creation" and "deletion" of relationships: "An enterprise specification may allow roles and relationships between roles to be created or deleted during the lifetime of the community". From our understanding it is not the same to talk about relationships in the general sense, than to explicitly refer to the creation and deletion of relationships. In this latter case, the concept of relationship between roles should be properly introduced and defined (either following ISO's GRM, the UML notion of relationship, or in any other way), and the precise life cycle	Change the sentence in page 12, line 37 with: "An enterprise specification may allow roles to be created or deleted during the lifetime of the community."
Spain	8	E	Page 12, line 53	typo?	Seems to be a missing article in the sentence.	Insert "the" between that and community: "... Community that THE community object
Spain	9	E	Page 14, lines 25-32	left margin of itemized lists	The left margin of the list a-d in NOTE 10 seems to be wrong. It should be indented properly.	Indent the numbered list properly.
Spain	10	TH	Page 14, line 30	new federation policies change?	Last sentence of point "c." of the numbered list of NOTE 10 states that a new federation is formed if the policies change. First, we do not agree with such statement. Second, it seems to be inconsistent with the rest of text in this clause, that allow for a federation to define behaviour for changing its policies.	Remove that sentence.
Spain	11	E	Page 14, lines 33-43		The text in these lines explains how to specify a policy, and therefore should not be at the end of this clause.	Move the text in lines 33-43 to the beginning of this clause. More precisely, just after the text in line 38 of page 13.
Spain	12	E	Page 15, line 29	font	The font of the header of the section ("7.9.2.4 Authorization") is bigger than it should be.	Fix the font.
Spain	13	E	Page 16, line 13	typo	The second statement of this sentence states that the concepts of subclause "6.4" are used to model an action that involves accountability of a party. It should be "6.5".	Say "6.5" instead of "6.4".
Spain	14	TL	Page 16, line 25	delegation	In lines 25-26 it says that: "By each such delegation, that enterprise object becomes an agent of the parties delegating, and the parties (collectively) become principal of the system." However, we think that the parties delegating become principal of the object, not of the system.	Change that sentence to: By each such delegation, that enterprise object becomes an agent of the parties delegating, and the parties (collectively) become principal of the object
Spain	15	TL	Page 17, line 6	prescription rules	We think that the fact that an object can be authorized to establish rules needs to be made explicit. This is missing in this sentence.	Change the last item in the list from: "that object is, in a previous epoch, specified to establish rules" to "that object is, in a previous epoch, specified OR AUTHORIZED to establish rules"
Spain	16	TL	Page 20, line 6	required correspondence statements (Inform. Viewpoint)	Last item requires that the specifier shall provide: "for each relationship between enterprise objects, the invariant schema (if any) that represents it". We feel that relationships between enterprise roles should be considered too.	Add another item to the list: "for each relationship between enterprise roles, the invariant schema (if any) that represents it".
Spain	17	E	lines 44-45, and page 21, line 1		The last three items of the list (nucleus, capsule, cluster) are not enterprise concepts, but engineering concepts.	Move these three items to the list below (page 21, lines 3-8).
Spain	18	TL	Page 23, Figure A.3	Actor, artefact, and resource	Actors, artefacts, and resources are roles.	Draw a generalization association between actor and role, resource and role, and artefact and role.

National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
Spain	19	TL	Page 24, Figure A.4	Accountability concepts	Agents are enterprise objects, and both contracting parties and principals are parties too.	1) Change the association between "contracting party" and "party" to be a generalization. Furthermore, eliminate the two names of the association ends ("has role" and "role of") because they may be confusing – they use the term "role", which may confuse the reader. 2) Change the association between "principal" and "party" to be a generalization. Furthermore, eliminate the two names of the association ends ("has role" and "role of") because they may be confusing – they use the term "role", which may confuse the reader. 3) Change the association between "agent" and "enterprise object" to be a generalization. Furthermore, eliminate the two names of the association ends ("has role" and "role of") because they may be confusing – they use the term "role", which may confuse the reader. 4) Change the name of the ternary association end of "agent" ("has delegated authority of") to "has delegated authority of, and acts for", which is what
Spain	20	E	Page 25, line 10	consistent use of italics	Consistent use of italics	Format in italics the second occurrence of "specification" in this line.
Spain	21	E	Page 25, lines 10-18	format	These lines are a list, but they are not formatted as such.	Format them as a list.
Spain	22	E	Page 25, lines 42-43	consistent use of italics	Looks like this paragraph does not follow the editorial convention of writing in italics the EL terms.	Format in italics the EL word in this paragraph.
Spain	23	TL	Page 26, B.1.1.2	Field of application	This subclause does not contain an example	Add the following example after line 3: Example – The e-commerce system specification belongs to the domains of trade and electronic business transactions, and therefore assumes the set of structures and roles common to these domains, such as buyer, seller, order, delivery, item, etc., or button, browser, client, server, electronic payments, etc. Moreover, the specification also assumes certain ways of doing business, and several kinds of valid operations only. Thus, the e-commerce system specification can only be applied within the domains of trade and electronic business transactions, i.e., it may not make any sense to use this specification in other environments where the aforementioned assumptions are not valid. Examples of such invalid environments include the cases of barter-based trading communities, or systems without computerized resources or with no access to electronic services (e-orders, e-payments, etc.).
Spain	24	TL	Page 27, B.1.3.2	Behaviour	This subclause does not contain a reference to the concept, nor a definition of it, as the rest of the clauses in this example do.	Add the following sentence lines 36 and 37: "The behaviour of an ODP system is determined by the collection of all the possible actions in which the system (acting as an object), or any of its constituent objects, might take part, together with a set of constraints on when these actions can occur. In the enterprise language this is expressed in terms of <i>roles</i> or <i>processes</i> or both, <i>policies</i> , and the relationships of these."
Spain	25	E	Page 28, line 1	Consistent use of italics	The roles, customer and e.comManager, are italicized. However, we think that they are names used in the specification, and therefore should be in sans-serif font.	Write them in arial font.
Spain	26	E	Page 29, line 49	typo	There seems to be a missing "s" in the sentence "They include thing that happen with...".	Write "They include thingS that happen with...".
Spain	27	E	Page 30, line 20	typo?	Typo?	Write "...that SUCH A system does." instead of "...that system does."
Spain	28	TL	Page 31, line 7	delegation	We think that delegating parties become principal of the delegated object, not of the system (see also ES14).	Instead of "By each delegation, that system becomes an agent of the party delegating, and the party becomes a principal of the system", we propose the alternative text: "By each delegation, an enterprise object (which may even be the system, when considered as a composite object) becomes an agent of the party delegating, and the party becomes a principal of that enterprise object"
Spain	29	E	Page 31, line 30	Typo	Accountability concepts are in 6.5, not in 6.4 (see also ES13).	At the end of line 30, change "[6.4]" by "[6.5]"
Spain	30	E	Page 32, line 13	format of reference	The reference [13.2.1] that appears at the end of line 3 is in bold font, and should not be in bold.	Check throughout the document the font size and typeface of the references.



National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
Spain	31	TL	Page 33, between lines 16-17	Missing case	There is a missing case in the examples of how policies affect the interaction cases. The text mentions case#2 in lines 17-21, then case#3 in lines 22-26, and then talks about a fourth case in line 27. However, there are now 5 cases in 7.3.2.	"Case 2)" in line 22 should be "Case 3)", "Case 3)" in line 22 should be "Case 4)", and line 27 should say "A fifth case...". Furthermore, two new paragraphs should be added between lines 16 and 17: one describing how policies affect interaction case#2, and other providing an illustrative example. A proposal for such two paragraphs follows: In case 2) the community objects interacting by fulfilling roles in another community should be subject to the policies of that community. Example – In addition to be subject to their own individual policies, all the community objects representing the different subsystems of e-system, (purchasingCommunity shippingCommunity, warehouseCommunity, etc.) should be subject to the policies of e-system.
Spain	32	TL	Page 33, lines 41-44	indentation of list	The left margin of the list in the example of B.1.6.4 seems to be wrong.	It should be indented properly.
Spain	33	TL	Page 35, lines 18-19	Figure B.2-1	In Montreal it was decided that the picture in B.2-1 should be eliminated after the discussion on the AFNOR comment FR-14, since it might introduce more questions than clarifications. Besides, there was the issue of the stereotype "relationship", a concept that is not defined in the Enterprise Language (neither in the RM-ODP).	Remove the figure and all references to the figure in the text. Do not represent loans as relationships, but as enterprise objects fulfilling actor roles in the borrow and return actions. In particular, replace the text in lines 18-19 with: "In the specification of the Library System, the Library can be considered as a single community, whose behaviour is given by the roles, processes, and polices described in the following sections."
Spain	34	E	Page 35, line 22	typeface of "books"	Consistent use of fonts.	"books" should not be in arial font, but in roman. Same happens in page 36, line 14.
Spain	35	TL	Page 36, lines 1 and 9	figure B-1	See ES 33.	Remove the figure. Remove line 9
Spain	36	TL	Page 36, line 6	loans	See ES 33 about loans not being considered relationships anymore.	Replace the text of the last sentence of line 6 ("There is also a possible loan relationship between borrowers and items.") with: "Besides, loans are enterprise objects fulfilling actor roles in the borrow and return interactions between borrowers and library items. For simplicity, we will also use the name loan to refer to such actor roles."
Spain	37	TL	Page 37, lines 18-19	loan relationships	See ES 33 about loans not being considered relationships anymore.	Add the following sentence at the end of the paragraph in lines 10-11: "Finally, loans are enterprise objects fulfilling actor roles in the borrow and return interactions between borrowers and"
Spain	38	TL	Page 37, lines 18-19	loan relationships	See ES 33 about loans not being considered relationships anymore.	Replace the text in lines 18-19 "Examples of membership policies are those that establish that there should be exactly one object fulfilling borrowe in a loan relationship, ..." with "Examples of membership policies are those that establish that each item can be simultaneously borrowed by at"
Spain	39	E	Page 37, line 26	typeface of "loan"	We are not sure that the word "loan" in the sentence "The loan period depends..." should be in arial font.	Write it in roman.
Spain	40	E	Page 39, line 22		"Case 1 – " uses a hyphen, while the rest of the cases use a period (e.g. "Case 2. ") The text of case 1 is not completely faithful to the text in 7.3.2	Use parenthesis instead of hyphens or periods, using the same style as in B.1.6.3 Change the text in line 22 with: "Case 1) Interaction between communities happens when a community object fulfils one or more roles in another community."
Spain	41	E	Page 39, line 30	heading of case 3	The text of case 3 is not completely faithful to the text in 7.3.2.	Case 3) The same object may fulfil specific roles in more than one community.

National Body ID	ID	Category (TH, TL, E, G)	Clause, Sub-clause	Paragraph, Figure, Table	Comment and rationale	Proposed new text
Spain	42	TH	Page 39, lines 37-38	Missing case	Interaction cases #4 and #5 of 7.3.2 are missing here.	Add the following text between lines 37 and 38: "Case 4) An object, in fulfilling a role of one community, interacts with an object fulfilling a role in another community. This kind of interaction is achieved using interface roles (see B.2.6.4). Please note that this kind of interaction can be within the scope of a bigger community, or not (as it may be the case in a business-to-business interaction). In the library, this is for instance the case of a librarian object, which periodically may need to call the Support Centre of the University to set the time of the clock, hence interacting with objects fulfilling roles in external communities to the libraryCommunity. Case 5) A community may include behaviour for creating new communities. Federation establishment is an example of this situation, since it means the creation of a new community involving the definition of an appropriate policy framework, the structure for that community, and the community contract. A creation of a community may happen
Spain	43	E	Page lines 42 and 47	numbering of cases	The numbers of the referenced cases do not seem to be right.	Replace: "(interaction case 2)" with "(interaction case #1)" in line 42, and "(case #1)" with "(case #3)" in line 47.
Spain	44	TL	Page 39, line 55	Missing explanation on case#4	Some explanations of the new interaction case #4 may be added here.	Add the following text, between lines 54 and 55: interaction case #4 happens when an object, in fulfilling a role of one community, interacts with an object fulfilling a role in another community. This interaction can be within the scope of a bigger community, or not. In case the interaction is within the scope of a bigger community C, the community objects need to obey the policies defined for each community, and also the policies defined for community C, in a similar way to interaction case #2. In case there is no such bigger community, the interactions should obey the individual policies defined for all the interface roles involved in the
Spain	45	TL	Page B.2.6.4	Interface role	The explanation about interface roles should be improved, and connected with the previous clause about interactions of communities.	Replace the text of lines 6-9 with: The enterprise language introduces the concept of <i>interface role</i> , a <i>role of a community</i> identifying behaviour that takes place with the participation of <i>objects</i> that are not members of that <i>community</i> . <i>Interface roles</i> are used in the fourth case of interaction between communities (see B.2.6.3) whereby an object, in fulfilling a role of one community, interacts with objects fulfilling roles in other communities. As mentioned in B.2.6.3, this is for instance the case of a librarian object of the library, which periodically may need to call the Support Centre of the University to set the time of the clock, hence interacting with objects fulfilling roles in external communities to the libraryCommunity.

# UK Vote and Comments on ISO/IEC JTC1/SC7 N2897 – Draft for FPDAM15414

ISO/IEC JTC1/SC7

**Title:** UK Vote and Comments on SC7 N2897, IS 15414 PDAM1: Information Technology - Open Distributed Processing - Reference Model – Enterprise Language – Amendment 1

**Project:** 07.77

**Vote:**

APPROVAL OF THE DRAFT AS PRESENTED

APPROVAL OF THE DRAFT WITH COMMENTS AS GIVEN ON THE ATTACHED

general:

technical:

editorial:

DISAPPROVAL OF THE DRAFT FOR REASONS ON THE ATTACHED

Acceptance of these reasons and appropriate changes in the text will change our vote to approval

ABSTENTION (FOR REASONS BELOW):

**P-member voting:** UK

**Status:** Final

**Date:** 11<sup>th</sup> November 2003

**Introduction**

The UK offers the following comments on the draft PDAM1 to IS 15414, Information Technology - Open Distributed Processing - Reference Model – Enterprise Language.

The comments are based on the structure and pagination of the document “07N2897 FPDAM 15414.pdf” posted by SC7 Secretariat on 2003-07-14.

This document is formatted in accordance with the SC7 conventions for Ballot Comment (as amended by the Working Group) and uses the following categorisation of comments.

Category	Description	Impact
G	General	Applicable generally i.e. in multiple places throughout
E	Editorial	Cosmetic including typographical and grammatical
TL	Technical Low (Minor)	Rejection of the comment would not prevent changing a negative vote to a positive one.
TH	Technical High (Major)	Considered to be an immovable position i.e. a negative vote would remain unless this was satisfactorily addressed

**1. Comments related to Clause 0 of FPDAM 15414**

**UK1**                      **Cat E Sub-clause 0.2, 4<sup>th</sup> main paragraph**                      **Overview and Motivation**  
 [p vi, line 1]

**Rationale**

The first sentence repeats page v, line 41.

**Proposal**

Replace “The purpose of this Recommendation | International Standard is to provide ...” with “This Recommendation | International Standard provides ...”

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**UK2**            **Cat TL**            **Sub-clause 0.2, 5<sup>th</sup> main paragraph**            **Overview and Motivation [p vi, line 10]**

### **Rationale**

The editor's note below asks for suggestions.

### **Proposal**

Add at end of last sentence, replacing "...", "the owners, the users, the developers and the maintainers of the system."

## **2.    *Comments related to Clause 5 of FPDAM 15414***

**UK3**            **Cat E Clause 5 Conventions [p 4, lines 31 - 41]**

### **Rationale**

This is an incorrect implementation of comment AFNOR 13 at the Montréal meeting, which called for the new material to be placed at the beginning of Annex B and not in the main body of the standard, where it makes no sense ("This Recommendation | International Standard contains references to the normative text of this Recommendation | International Standard..." – well, of course it does.)

### **Proposal**

Reject the change to clause 5, and implement AFNOR 13 at the beginning of Annex B.

## **3.    *Comments related to Clause 6 of FPDAM 15414***

**UK4**            **Cat X Sub-clause 6.3**            **Behaviour concepts (Actor, Artefact and Resource) [p 5, lines 20-30]**

### **Rationale**

A distinction is needed between the usage of the concept, role, in these definitions, where it is used with the meaning of "action role", and in the rest of the document, where it is used with the meaning "role in a community". The UK accepts that we are unlikely to achieve consensus on introducing a new concept of action role, but we do believe that the text as it stands will lead to confusion, and that the only way to avoid this is to implicitly make the distinction, particularly in these definitions, but also wherever else the concepts of actor, artefact or resource are discussed.

### **Proposal**

Rewrite lines 19-30 as follows

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**6.3.1 actor (with respect to an action):** A role (with respect to the action) in which the enterprise object fulfilling the role participates in the action. That object may be called an actor.

NOTE – It may be of interest to specify which actor initiates that action.

**6.3.2 artefact (with respect to an action):** A role in (with respect to the action) which the enterprise object fulfilling the role is referenced in the action. That object may be called an artefact.

NOTE – An enterprise object that is an artefact in one action can be an actor in another action.

**6.3.3 resource (with respect to an action):** A role (with respect to the action) in which the enterprise object fulfilling the role is essential to the action requires allocation or may become unavailable. That object may be called a resource.

NOTE 1 – Allocation of a resource object may constrain other behaviours for which that resource is essential.

NOTE 2 – A consumable resource object may become unavailable after some amount of use. Any resource object may become unavailable after some amount of time (for example, in case a duration or expiry has been specified for the resource).

See also UK6 and UK13

**UK5            Cat TH            Sub-clause 6.4.3 Violation [Page 6, line 3]**

### **Rationale:**

Issues were raised by the need to cover the case of failure to perform a required action - the concepts of “action” and “inaction” are inadequate to cover fully the situations that could occur. The concept of inaction is not defined and straightforward interpretations of it lead to divergent infinite traces of actions. Definition of Violation in terms of behaviour, rather than action avoids this difficulty, since a null behaviour is still a behaviour.

### **Proposal:**

Change the definition of violation to “a behaviour contrary to that required by a rule” and delete Note 1.

## **4.    Comments related to Clause 7 of FPDAM 15414**

**UK6            Cat TH            Clause 7    Structuring rules [p 6, before line 42]**

### **Rationale**

See UK4

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### Proposal

Insert, before line 42, the following note:

NOTE: In this clause, the concept of role is generally used in the context of the community in which the role concerned is specified. Thus an object's role is an identifier for some behaviour that the object exhibits in that community. In certain circumstances the behaviour identified is specific to a particular action and this is explicitly stated in such cases (e.g. see 7.8.4).

**UK7            Cat TH            Sub-clause 7.1 Overall structure of an enterprise  
specification [p 7, lines 23-32]**

### Rationale

This text:

- a) is at a level of detail which is out of place in this sub-clause;
- b) parallels text in 7.3.2 (p 9, lines 19-24) but is worded in a different style and this is likely to confuse the reader.

### Proposal

**Delete p7, lines 23-32.**

**UK8            Cat E   Sub-clause 7.3.1            Community [p 8, line 36]**

### Rationale

Typo

### Proposal

In the 1<sup>st</sup> sentence insert "it" between "meets" and "its".

**UK9            Cat TL            Sub-clause 7.3.2   Relationships between communities [p 9,  
line 22]**

### Rationale

Clarity

### Proposal

Replace p9, line 22 by:

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“– the enterprise specification requires the same object to fulfil specific roles in more than one community and behaviour of the object in any given role may affect its behaviour in other roles;

**UK10**      **Cat E Sub-clause 7.3.2**      **Relationships between communities [p 9, line 23]**

### Rationale

Clarity

### Proposal

Replace p9, line 23 by:

“– an object, in fulfilling an interface role (see 7.8.3) of one community, interacts with an object fulfilling an interface role in another community

**UK11**      **Cat X Sub-clause 7.5.2**      **<X>-federation community type [p 10, lines 26-37]**

### Rationale

Response to Editor’s note requesting input:

The current text concentrates on management of shared relations of the domain type, and so takes a more restrictive view of federation than that assumed, for example, in the ODP Naming Framework. Review of this text has also identified a need for a more general approach in 10746-3 clause 5.

### Proposal

Replace lines 26-37 with:

An <X>-federation community represents the agreement by some number of pre-existing communities to cooperate to achieve a shared objective. The characterising features of a federation are that each member agrees by participating in the federation to contribute resources and constrain its behaviour so as to pursue the shared goals. However, a federation preserves the autonomy of the original participants by hiding any aspects of the members not directly relevant to the common goal and includes defined behaviour that enables a participant to withdraw from the federation at any time. The template for a federation is known as a federation agreement.

**UK12**      **Cat E Sub-clause 7.8.1**      **Topic [p 12, line 13]**

### Rationale

Result, purpose, or sub-objective are effectively synonymous.

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### Proposal

Delete “result, purpose, or”

**UK13**      **Cat TH**      **Sub-clause 7.8.4**    **Enterprise objects and actions [p 13, lines 2-9]**

### Rationale

Although the heading refers to enterprise objects and actions, the text is not clear what this means. See also UK4

### Proposal

Replace lines 3-9 with:

A way of categorizing the involvement of an enterprise object in an action is to consider it has having a role with respect to that action:

- The object can participate in carrying out the action; in this case it is said to fulfil an actor role, or be an actor with respect to that action.
- The object can be mentioned in the action; in this case it is said to fulfil an artefact role of be an artefact with respect to that action.
- The object can both be essential for the action and require allocation or possibly become unavailable; in this case it is said to fulfil a resource role or be a resource with respect to that action.

**UK14**      **Cat TL**      **Sub-clause 7.8.5**    **Process rules [p 13, lines 24-25]**

### Rationale

Wording is unclear and the distinct use of actor and role is confusing.

### Proposal

Replace entire paragraph with:

“If processes are part of a community, each step must be associated with one or more roles, at least one of which must be an actor.”

**UK15**      **Cat TH**      **Sub-clause 7.9.1**    **The specification of a policy [p 13, line 36]**

### Rationale

Existing wording is ambiguous and may be construed to mean that the policies of a community could apply to enterprise objects that have no role in that community.

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### **Proposal**

Change “to enterprise objects (regardless of role),” to “to enterprise objects that fulfil roles in that community (regardless of which role)”.

**UK16**      **Cat E Sub-clause 7.9.1 The specification of a policy [p14 lines 10]**

### **Rationale:**

Typo – fulfils is incorrectly spelt.

### **Proposal:**

Replace “fulfills” with “fulfils”.

**UK17**      **Cat TL Sub-clause 7.9.1 The specification of a policy [p14 lines 31-32]**

### **Rationale:**

The UK believes that the 3<sup>rd</sup> and 4<sup>th</sup> cases are too close to be distinguished.

### **Proposal:**

Delete the fourth case, editing the beginning of Note 10 appropriately

## **5. Comments related to Clause 11 of FPDAM 15414**

**UK18**      **Cat TH Sub-clause 11.4 Enterprise and engineering specification correspondences [p 20, line 44 – p 21, line 1]**

### **Rationale**

Nucleus, capsule and cluster are not enterprise language concepts, but engineering language concepts.

### **Proposal**

Move the lines concerned to the next list (i.e. before heading 11.4.2).

## **6. Comments related to Annex A of FPDAM 15414**

**UK19**      **Cat E Annex A, Introductory material [p 22, lines 14 and 15]**

### **Rationale**

Reference is incorrect.

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### Proposal

Change to “ISO/IEC DIS 19501, Information Technology – Unified Modelling Language (UML)”

**UK20**      **Cat TH**      **Annex A, Introductory material and 1<sup>st</sup> diagram**  
**[Page 22, lines 16-29]**

### Rationale:

The text does not match that agreed in the Montreal meeting, with the result that Figure A1 is empty.

### Proposal:

Replace lines 16 to 17 with:

The diagrams representing this meta-model are presented below under four broad headings as found in Clause 6 of the main body of this Recommendation | International Standard, *viz*:

- System concepts – representing the relationships between an enterprise specification and the system that it describes
- Community and Behaviour concepts – representing relationships between the main enterprise language concepts used in modelling the behaviour of a community
- Accountability concepts
- Policy concepts

Delete Figure A1 and its caption, and renumber subsequent figures.

Amend title of (new numbering) Figure A2 to “Community and behaviour concepts”

**UK21**      **Cat TH**      **Annex A, Figure A.2 [p23 line 1]**  
**[Page 22, lines 16-29]**

### Rationale:

The following changes are proposed:

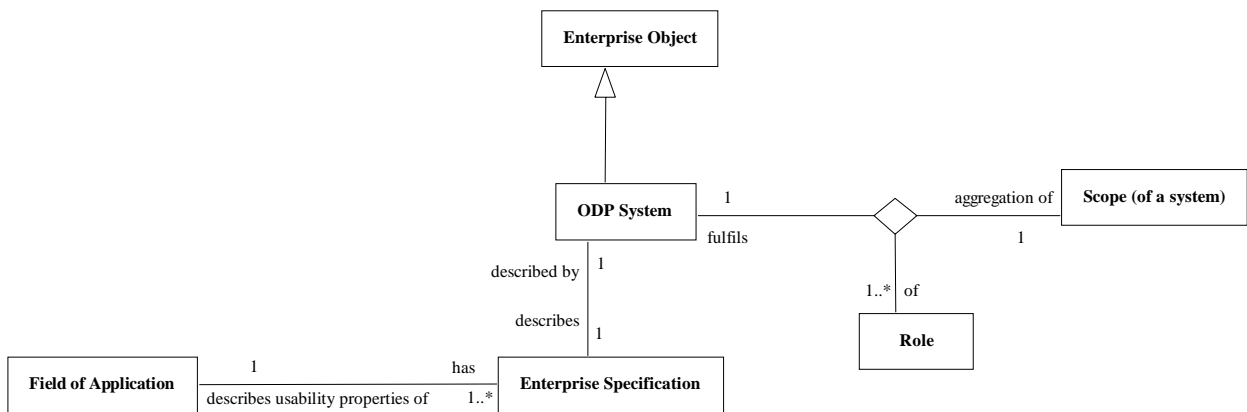
- a. There is a need to capture, in the diagram, the fact that Scope (of a System) is the aggregation of the roles that the system fulfils.
- b. An ODP System is a specialisation of Enterprise Object.

### Proposal:

Replace Figure A.2 with the following:

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**UK22 Cat TH Annex A, Figure A.3 [p23 line 4]**  
**[Page 22, lines 16-29]**

### Rationale:

The following changes to Figure A3 are proposed:

- The association between Objective and Process is redundant, since a Process, as a graph of Steps, each of which is an abstraction of an Action, is effectively a way of representing a Behaviour, and the relationship with an Objective is represented by the direct association between Behaviour and Objective.
- The successive decomposition of steps, as processes, needs to be represented explicitly.
- The relationship between Community, Enterprise Object, and Role is more complex than shown in the current document, and is best represented as a ternary association.

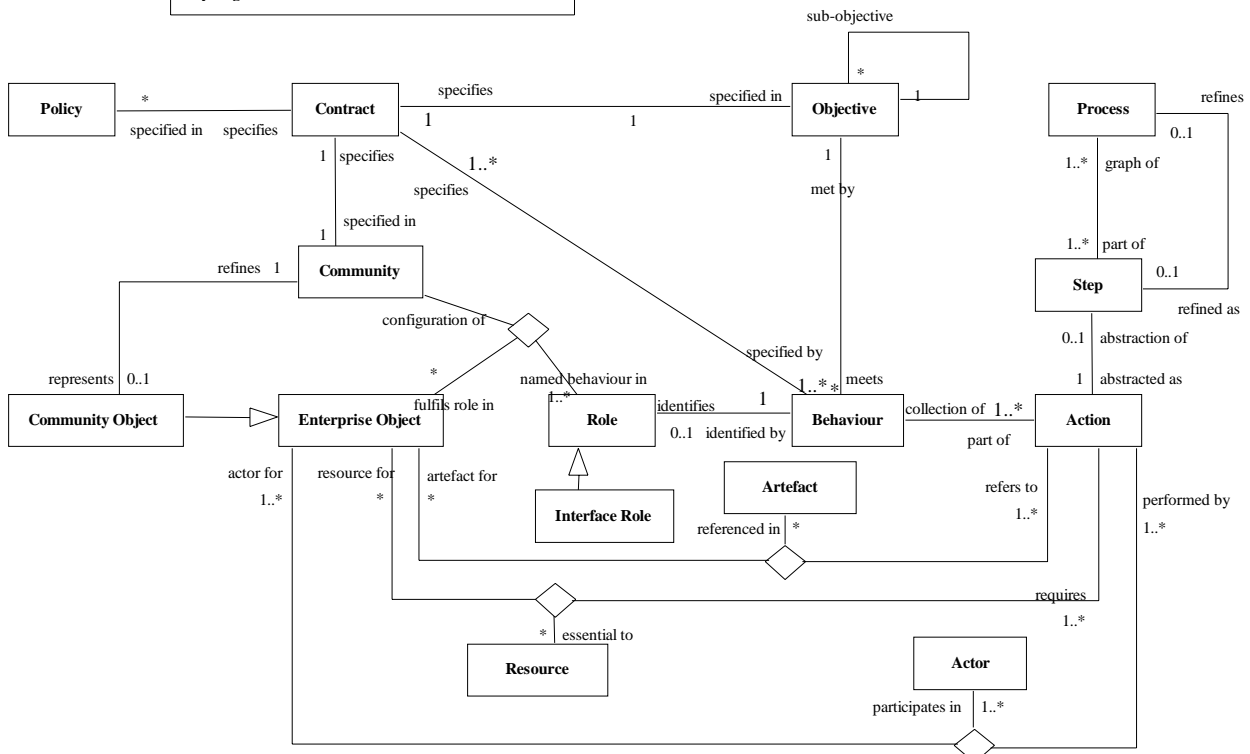
### Proposal:

Replace Figure A.3 with the following:

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Where Cardinalities are unspecified it means that there is not yet agreement on what those cardinalities should be



## 7. Comments related to Annex B of FPDAM 15414

### UK23 Cat E Annex B General

#### Rationale

There seems to be some kind of typographical problem with some of the italicised text in the PDF version of the document, where it is apparently superscripted by one or two points. For example, on page 35, line 15 the word “*community*” is raised above the general line of the text. In line 26 of the same page it is at the same level as the remainder of the text.

#### Proposal

Fix the problem.

### UK24 Cat TH Annex B, Introductory material – note [Page 25, lines 19-23]

#### Rationale:

The notation explanation is too important to be hidden away in a note.

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### Proposal:

Make the note body text.

### UK25          Cat E Annex B1, Introductory material [Page 25, lines 30-35]

#### Rationale:

AFNOR Comment FR8 into the Montreal editing meeting said: “These lines give an introduction to both examples and are not only for the first example of Annex B.” The agreed disposition was: “Cat 2 - move only 1st para (second and bullets having been deleted by ES10)” (by implication to the beginning of Annex B).

#### Proposal:

Make the move agreed, with a slight re-wording as below:

This annex explains the concepts and structuring rules of the enterprise language and provides examples of how they may be used in an enterprise specification. This annex is not normative.

An ODP specification comprises one or more viewpoint specifications of an ODP system and its environment. An enterprise (viewpoint) specification is expressed in the enterprise language. [3-4] The enterprise language uses concepts taken from ITU-T Rec. X.902 | ISO/IEC 10746-2, and introduces refinements of those concepts, prescriptive rules and additional concepts defined using concepts from ITU-T Rec. X.902 | ISO/IEC 10746-2. [3-4.2.2] The additional concepts are those of Clause 5 of ITU-T Rec. X.903 | ISO/IEC 10746-3 and those in this Recommendation | International Standard.

### UK26          Cat TL          Sub-clause B.1.2.2 Enterprise Object [p 27, line 1]

#### Rationale

The statement, though true, is hardly illuminating, and seems to conflict with its equivalent in B.2.3.3. This was discussed at the Montréal meeting (under the comment UK27), and the agreed disposition was “Cat 2 – use similar words as in B,2.3.3”.

#### Proposal

Use the explanation in B.2.3.3.

### UK27          Cat E Sub-clause B.1.3.2 Behaviour [p 27, lines 36-39]

#### Rationale

The editing instruction from Montréal (ES14, “delete the definition and use the style B.2.3.1”) has only partly been followed. The style of B.2.3.1 is not to *define* terms but to *explain* them.

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### Proposal

Use the explanatory text from B.2.3.1.

**UK28**      **Cat E Sub-clause B.1.4.1**      **Policy [p 28, lines 45-46]**

### Rationale

Clarity

### Proposal

Change “...from time to time, of which of some collection of *policies* is to be applied ...” to “...from time to time, of which *policy* of some collection of *policies* is to be applied ...”

**UK29**      **Cat TH**      **Sub-clause B.1.4.3 Obligation [p29, line 6]**

### Rationale

Violation - see UK5

### Proposal

Change “If that behaviour does not occur as prescribed, that inaction is a violation” to “If that behaviour does not occur as prescribed then there is a violation”;

**UK30**      **Cat TH**      **Sub-clause B.1.4.6 Violation [p 29, line 34, and 43-44]**

### Rationale

Violation - see UK5

### Proposal

1. In first sentence replace “action” with “behaviour”.
2. Replace “inaction by the shippingSubsystem. This is a violation of the rule...” with “incorrect behaviour by the shippingSubsystem, and is a violation of the rule...”

**UK31**      **Cat E Sub-clause B.1.5.1**      **Accountability [p 29, line 52]**

### Rationale

Consistency

### Proposal

Replace “Reference Model” with “Recommendation | International Standard”.

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**UK32**            **Cat E Sub-clause B.1.6.1**    **Establishing a Community [p 32, line 17]**

**Rationale**

Clarity – it is assumed that the objects named are the only members of the new community.

**Proposal**

Replace “including” with “comprising”.

**UK33**            **Cat TL**            **Sub-clause B.1.6.3 Relationships between communities [p 32, line 56]**

**Rationale**

Consistency with 7.3.2.

**Proposal**

Replace “The same object may fulfil a role in two communities, ...” by “The same object may be required to fulfil a role in two communities, ...”.

**UK34**            **Cat TL**            **Sub-clause B.1.6.3 Relationships between communities [p 33, line 2]**

**Rationale**

Clarity.

**Proposal**

Replace “by providing information for use in daily asset accounting, ...” by “by providing information available from fulfilling the role of inventoryMaintenance for use in daily asset accounting, ...”.

**UK35**            **Cat TL**            **Sub-clause B.2**    **Second Example – Specification of a Library [p 34, lines 14-15]**

**Rationale**

This introductory paragraph should make clear that the ODP system in this case is not a computer system (see lines 33-35).

**Proposal**

1.        Replace with the following merge of lines 14-15 and 33-35:

          This section provides a second example to illustrate the use of the enterprise language concepts and structuring rules to specify an ODP system. The example is an enterprise

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specification of a Library, describing all the elements that comprise it. Thus, in this case, the ODP System is an enterprise specification of a business system, and the example shows how RM-ODP specifications (in particular, those from the enterprise viewpoint) can be used to specify systems other than computer systems.

2. Delete lines 33-35.

**UK36**      **Cat E Sub-clause B.2.3.2**      **Role [p 36, lines 7-8]**

### **Rationale**

The sentence is garbled.

### **Proposal**

Replace with:

In addition, a library *role* is fulfilled by the *community* when considered as a *composite object* (i.e. a *community object*, see B.2.6.3), and a calendar *role* is fulfilled by an *enterprise object* that deals with the passage of time (e.g. a wall clock).

**UK37**      **Cat E Sub-clause B.2.5.1**      **Party [p 38, line 9]**

### **Rationale**

Typo

### **Proposal**

Insert “a” between “library Z has” and “Library Support System”.

**UK38**      **Cat E Sub-clauses B.2.5.7 and B.2.5.6**      **Agent and principal, and Prescription [p 38, lines 33 and 39]**

### **Rationale**

The numbering of these two sub-clauses has been exchanged.

### **Proposal**

Correct the numbering.

**UK39**      **Cat E B.2.6.3 Relationship between communities [Page 39 lines 23 and 30]**

### **Rationale:**

Typo – fulfils is incorrectly spelt.

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**Proposal:**

Replace “fulfills” with “fulfils” in both places.

**UK40**          **Cat TL**          **B.2.6.3 Relationships between communities [p 39, line 30]**

**Rationale**

Consistency with 7.3.2.

**Proposal**

Replace “An object fulfils roles in two communities.” with “An object is required to fulfil roles in two or more communities.

**UK41**          **Cat TH**          **B.2.6.3 Relationships between communities [p 39, lines 35-37]**

**Rationale**

It is unclear why the additional roles of “academic” and “student” have been introduced, what community they belong to, and how they illustrate the case.

**Proposal**

Replace “In order to relate the university community to the libraryCommunity, we need to identify, among others: the role, academic, which is fulfilled by all research and teaching staff of the university; and the role, student, which is fulfilled by all people in undergraduate or postgraduate degree programs.” with “Thus, in order to fulfil a role of borrower, enterprise object must fulfil an appropriate role in the university.”