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| **Template for comments and secretariat observations** | Date: 2/15/2013 | Document: **SC38 N780 WD 18384-3 RA for SOA part 3** |

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| **MB** | **Clause No./ Subclause No./ Annex** (e.g. 3.1) | **Paragraph/ Figure/Table/ Note** (e.g. Table 1) | **Type of com ment** | **Comment (justification for change) by the MB** | **Proposed change by the MB** | **Secretariat observations** |
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| OA 401 | Line 201 |  | TE | No mention is made of ontology except in the title, but is “ontology” related to what’s in lines 194-200. Probably the answer is “yes”, and so some may wonder about the pivot.  | Unsure. |  |
| OA 402 | Line 208 |  | TE | Probably “ontology” is one of the terms needing to be defined? Maybe this is addressed elsewhere? | Define “ontology”. |  |
| OA 403 | Line 224, etc. |  |  | Missing links. | Provide them. |  |
| OA 404 | Line 292 | Fig. 1 | ED | Fig resolution is bad. | Increase resolution for figure. |  |
| OA 405 | 4.1.1 Applications | Line 304 | ED | Should be “populating the ontology.”  | Period goes before final quotation. |  |
| OA 406 |  | Lines 308-309 | ED | No citations: (Explanations of what ontologies are and why they are needed can be found in, for example,309 Beyond Concepts: Ontology as Reality Representation and What is an Ontology?). | Provide citations and references. |  |
| OA 407 | 5.1 | Line 343 | ED | Requires period.. | Add period at end of sentence. |  |
| OA 408 | 5.2 | Line 347 | TE | Unclear why you need “element”. Why not talk in terms of “classes” or “instances”? The following is not necessarily clear: “An *element* is an opaque entity that is indivisible at a given level of abstraction.” What is “opaque”, “indivisible”, “given level of abstraction”? Are “elements” instances? It seems so, but I’m unsure. Elements are atomic members of sets: is that what you mean?  | Clarify. |  |
| OA 409 |  | Line 352 | TE | One problem is that there is as yet no mention of time. Is that because, given it’s UML-centric, that there is a bifurcation between “class” and “activity” models? In most ontologies, these are in the same ontology. | Clarify or change. |  |
| OA 410 |  | Line 371 | TE | “Used by” is so general that it can apply to nearly any relation. Is that what is desired? | Clarify or change. If “uses”/”used by” is going to be defined by (line 381) “a particular sub-domain, application or even design approach.”, then nearly anything goes. |  |
| OA 411 | 5.4 | Lines 384-385 | TE | The statement “Whether to perceive a given part of an organization as an organizational unit or as the set of people within that organizational unit is an important choice of abstraction level …” is problematic. An organization and the set of people constituting it are two separate ontological notions, always. If you want to really distinguish these, then the organization is the intension, and the set of people at any given time constituting it are the extension. But an organization (organizational unit) is whole entity in its own right. Allowing arbitrary choice is the matter is not good. | Better justify this, or modify it. |  |
| OA 412 |  | Lines 386-388 | TE | “Uses/used by” seems to be viewing elements as resources. Is that correct? Typically persons will have multiple “roles” in multiple organizations, but also in nearly arbitrary social relationships: e.g., carpenter, IBM employee, father, farther of (John Jones), owner of (1959 lime green chevy), etc.  | May be ok, but needs clarification, justification. |  |
| OA 413 |  | Line 392 | TE | “Some elements have an internal structure”: if there is internal structure, care must be made to distinguish kinds of properties of that internal structure. E.g., if X is a part of Y (mereology/mereotopology), that is quite different from John is a member of Y.  | Needs clarification, justification. |  |
| OA 414 |  | Line 486 | ED | “class since an organization is many cases is in fact just a particular kind of system.” Should be: “class since an organization in …” | Change word. |  |
| OA 415 | 5.6.2 | Lines 442-446 | TE | Composition needs to be better defined. Is composition a subproperty of uses? If X uses Y, then is ‘X uses Y” an instance of composition? | Need further definition, description of composition. |  |
| OA 416 | 5.6.3 | Line 453 | TE | “*Joe* (the owner) is an instance of **Element** and used by (owner of) *CarWashBusiness*” illustrates why these are slippery notions. Joe is an instance of Element, which itself is the superclass of System, the latter which has instance CarWashBusiness. In OWL, subsumption (i.e., subclass relation) is defined to be transitive, meaning: If B is a subclass of A, then all instances of B are instances of A. This means that CarWashBusiness is an instance of System and also an instance of Element. So any property of an Element gets inherited down to any instance of a System. Is that what is desired?  | Needs clarification, justification. |  |
| OA 417 | 5.7 | Entire discussion | TE | The Represents property, if I understand it, allows a complex Element to be represented by a simple Element, and vice versa. Is this what is intended. Can a given instance of Element represent itself, i.e., is Represents reflexive? Can a given Element instance, say John represent a complex System which uses and/or represents other Systems and Elements, some of which are persons too? | Needs clarification, justification. |  |
| OA 418 | all | all | TE | The reviewer only got as far as p. 23 but believes many of the previous comments will be applicable to the remainder of the document. | The authors of this work should look at resource, process, enterprise architecture, social role ontologies as part of reassessing the design. |  |