SC32WG2-Wuh-04

Minutes of ISO/SC32 WG2 Study Project meeting

28th – 30th of August/2006 held at SKLSE, Wuhan University in Wuhan, China

1 Opening and the 1st day

1.1 Roll call of the delegates

Well done, organized by Prof. Horiuchi

Also see Attendant List (Ad2-2)

1.2 Appointment of Secretary (Minutes)

LIANG Peng was assigned.

1.3 Adoption of the agenda

Adopted with some revisions

1.4 "Current trends on the Ontology Technology Standardization"

By Masao Okabe

Present the state of art of the ontology technology standardization, including ISO, OMG, W3C, other organizations etc.

Q: by Baik, what is the main dream of ontology standardization?

A: shown in page 20, but I am still curious about where to go. For example, in medical domain, medical ontology is only for human, but not for computer. I think whether the ontology is for human or computer is a big issue, or mainly for human or mainly for computer.

Q: by Jin Yixin, if a repository can register the language, dose it means it can also register the metamodel.

A: Yes.

1.5 "Semantics Management Capabilities of XMDR"

Kevin D. Keck

Present the XMDR capability for the semantics management in Web service, including terminology version management.

Q: by Baik, question of terminology, ontology lifecycle management and ontology versioning, what's the difference?

A: the concept of ontology lifecycle management is broader than ontology versioning.

Q: by Baik, what's the difference between ontology evolution and ontology lifecycle management, ontology version.

A: by Horiuchi ontology lifecycle is born and death, ontology evolution is the

change of ontology, and ontology versioning is how to record the change step.

By Yangfan: Ontology evolution can be described according to two kinds of requirement, i.e. requirement about change and requirement about consistency.

Q: by Jin Yixin, prototype of XMDR, how to narrow the search result in XMDR? And now XMDR is trying to register the ontology, in my understanding, XMDR should more contents than ontology, such as the ontology graph, what do you think about this?

A: You can restrict your search in certain field. I guess the reason for treating the ontology graph…

Q: by Yangfan, What do you mean by "Formalization Failed" use case?

A: Appropriate concepts can not be found.

1.6 Report of the study "Requirements and Overall Design for Ontology Evolution"

HE Yangfan, SKLSE

Q: what is the difference between conceptual change and specification change?

C: Are you proposing some metamodel and operation for the change management?

Q: Is change closure requested by user?

A: No, change closure is calculated by intrinsic constraint between changes.

Q: page of "change model", what is "modify"?

A: Renaming.

Q:How do you know some change is conceptual change or specification change? What is the difference between them?

A: by Yangfan: conceptual change is the fundamental changes that people suggest, and specification change is some smaller ones.

For example, when there is big progress in the domain, such as medicine or biology, domain experts may require some conceptual change to the domain ontology.

In terms of 11179, when a term is first specified as a property and later as a concept, the change is specification change.

Q: In ontology world, is it possible that some concept is deleted, but the corresponding instances are still there?

A: The atomic changes in slide 23 are for concept, property and so on. But in MFI-3, we just define Ontology_Atomic_Construct, there is no difference between concept and property.

Yangfan: There is no confliction. We define just three kinds of operation that can be applied on Ontology_Atomic_Construct, "Add class", etc. can be treated as the

instances of them.

Q: About propagation, how can evolution of RO propagate to different LOs?

A: For example, Base quantity is reused in ontology Z. When Base quantity is deleted with some evolution strategy in X. Then Z should be updated accordingly. User requested consistency and Propagation Strategy are needed for Z.

Q: About "modify": confusing

A: by Yangfan: modification means no change to the URI.

Q: If two concepts have the same URI but different names, are they the same concepts?

A: They are the same.

1.7 Report of the study "MFI Model Registration and Model Mapping for Ontology Evolution"

Masaharu Obayashi

Present the ontology mapping related terms and structures.

Q:

1.8 Discussion of Yangfan's proposal

2 The 2nd day

2.1 Report of the study "Current trends on Process Modeling"

Hajime Horiuchi

Present the purpose, notation, metamodel for process modeling, and its requirement for ISO standards.

Q: by Baik, in the Road Map, how about the status of demonstration? Is it a prototype?

A: Yes, actually a prototype has been implemented, but with no content.

Q and C: by Okabe, PSL is an advanced technology, but it is not new, because it uses KIF which is a traditional technology. But MIT handbook is out of scope, because it is only for human, but not for computer.

C by Hajime: To promote the MFI application in Process modeling, we have to establish active collaboration with these groups, such as OMG SPEM, ISO TC184, etc.

2.2 Report of the study "Ontology-Based Model Design in Logistics Distribution Domain"

WANG Jian, SKLSE

Present the concept model and process model when facing requirement change in the logistics distribution domain.

Q: By Baik, at the beginning of your presentation, you mentioned about

domain model representation, for concept model it is OWL, for process model, it is OWL-S, why?

A: OWL-S for process description, OWL for static concept description.

Q: by Okabe, why there are only two kinds of concept in your domain model, the Actor and Resource?

A:

Q: by Hajime, all the atomic processes are defined by you? How many atomic and composite processes are defined in OWL-S?

A: Yes. More than 30 atomic, and 10-15 composite processes.

Q: by Jing Yixin, could you show me the case study? You defined the change closure. Is there any abstract level for the reusing of this strategy for generating the strategy? And who will be responsible for specifying the strategy, the user or ontology administrator?

A: by Yangfan, evolution strategy is a concept describing the relationship between change closure, consistency closure and additional changes which are needed for the integrity of the new ontology. So evolution strategy depends on context heavily. And the reuse of it is not the main concern for ontology evolution problem. The ontology administrator will be responsible for the strategy definition.

Q: by Okabe, to slide 29, I don't understand what the change closure is?

A: change closure means VIPCustomer change may impact some other concept, such as its subclass, subproperty, etc.

Q: by Hajime, how to define the constraint of the change closure? And how to check the consistency of the change closure?

A: by Yangfan, How to calculate the closure depends on the language. As Masao san mentioned yesterday, for some languages, it is reasonable to keep individuals while corresponding concept is gone, while in the other languages, it is mandatory to delete all the individuals with the deletion of the concept. So change closure is calculated based on constraint between changes for particular languages. Later I will show you a reference paper , where the author has a example table showing the implication of constraint   between changes. We can do similar work for all the other languages. For MFI-3, we may just have "Constraint between changes" and "Change closure", leaving the calculating details to concert languages.

Q: by Okabe, where did you find the SWRL condition?

A: …

Q: should

2.3   Report of the study "Requirements and Overall Design for Process model registration based on ontology"

WANG Chong, SKLSE

Present the overall design of process model based on ontology and its extension mechanism based on MFI.

Q: question for the example shown in slide "Atomic Process & Composite Process"

A:

Q: by Okabe, your model is quite similar with OWL-S?

A: yes, we just borrow some basic idea from OWL-S, and you can regard it as the extension of OWL-S.

Comments: by Hajime, I propose to modify the name to "MFI profile for registering process model based on OWL-S"

A: not based on OWL-S, we just borrow some ideas from OWL-S and PSL.

Q: where the ontology is used in your proposal?

A: as you can see from page 14, ontology can be used for the annotation of process model.

2.4 Report of XMDR "Toward Graph Registry and Version Control of XMDR"

Doo-Kwon Baik, Yixin Jing

Present the general architecture of XMDR, and make it to be able to register the graph.

Q: when people publish ontology, normally they don't publish its version and other complementary information, so what can you do for this kind of ontology version control?

A:

3 The 3rd day

3.1 Drafting a Skeleton on Working Drafts for Ontology Evolution

Reference to "Question and comments to Yangfan.doc"

3.2 Drafting a Skeleton on Working Drafts for Process Model Registration

Reference to "Question and comments to Wangchong.doc

3.3 Future action plan