Init1bes1 - Compare Semantic metadata

Pre Interview:

Item	Information/Response
Date:	12/08/2009
Requirement # unique id:	Init1bes1
Originator/Customer's Name:	Tejas Dave
Originator/Customer's Company:	EkagraSoft
Stakeholder Community: Enter appropriate category of stakeholder from Primary Stakeholders: • Software and Application designers and architects • Software and Application engineers and developers • Scientific and medical researchers • Medical research protocol designers • Clinical and scientific research data and metadata managers • Clinicians • Patients • Medical research study participants • Broader Stakeholders: caBIG® Community WS NIH projects and related commercial COTS vendors (caEHR, SDO's (HL7, CDISC); International Collaborators (e.g NCRI, cancerGrid, China), Government and regulatory bodies (FDA, CDC, ONC) *(link to view SemConOps Stakeholders description)*.	Software and Application engineers and developers
Summary of requirement pre-interview, by Reviewer:	Business Goal: To improve metadata reuse Actor: Information Specialist (Modeler) A modeler uses a model repository browser that allows comparisons of different models (complete or partial). Or a modeler uses a Knowledge Repository Browser that provides ability to compare various levels of semantic metadata such as data elements, object classes, value domains, concepts is needed.
Recommended Next Step Enter one: Follow-up interview, Observe, Use Case Template (text), Use Case Model (formalized/UML diagram), Group Discussion, Prototype, Waiting Room	Follow-up interview

Interview

Item	Script / Question	Information/Response
1	Hello, my name is NAME. I am calling you today because NCI and caBIG are working toward a new and improved version of the semantic infrastructure to better **support integration scenarios**. Our first step was to organize requirements collected over the past year. Your organization has expressed a requirement/need for BRIEF STATEMENT OF USER REQUIREMENT. This has been identified as potentially a critical component to support application/data and service integration, and we need more information in order to enable us to meet this requirement. **Do you have about 30 minutes to talk about this?**	Yes.
2	Do you have any solution integration needs? If so, what are they? Have you envisioned new ways of interacting with existing or new parts of the semantic infrastructure? *(prompt to elicit changes/new ways of using the infrastructure)*	We need browsers that interact with and search Knowledge and Model Repositories and support: • Comparison of selected search results: The comparison functionality should allow: -Side-by-side comparison of the metadata/model components -Graphical (with visual clues such as coloring common attributes mapped to same DEC and/or CDE, classes sharing the same object classes) and textual representation (with visual clues such as similarities colored the same way) -Extension of the list compared by new components thorugh additional searches -[VCDE:For model view] Even if not selected, seeing generalization of selected classes (inherited subclasses) -[VCDE:For model view] Uploading (or removal) of an annotated model that is under development, to be able to compare with selected classes -[VCDE:For model components] Selecting some of the compared items, adding to a shopping cart (basket) that can be exported in XMI (if needed transformed to classes for modeling tool consumption) and XML compliant with ISO 11179 XSD.
3	Are there any business changes you are assuming we will be able to deal with? *(prompt to elicit changes/new ways of using the infrastructure)*	Focusing more to developing browsers for modelers/developers as a consumer base given the requirements above is for improving metadata reuse and primarily ask for: - Better support for modeling tools and the input formats to support modelers - Better search, visulization functionalities to improve model-level reuse
4	Are there any capabilities you are expecting to be available to support your needs? *(prompt to elicit expectations/dependencies)*	Knowledge/model repository browser (or browsers) to support easy discovery/visulization and reuse of metadata/model components.
5	Do you use any of the existing software/services? If so, what do you like or dislike about it? *(if related to existing capability)*	CDE Browser, UML Model Browser Rigid /static in terms of view (not dynamic). So textual hard to understand. Performance. Comparison is primitive. Color coding is not user friendly. Discovering and reusing model components is not easy.
6	If this requirement in met, what would be the benefits? If you do not have it, what would be the negative impact? *(prompt to elicit benefits/value - will help to prioritize)*	This will improve reuse of metadata. The negative impact would be poor (if not none) reuse and (unintended) redundant metadata.
7	If, for any reason, we were not able to create that solution, do you think there might be another way to solve this issue? Can you think of an alternative solution? *(prompt to elicit alternative solutions/workarounds)* *(to be prepared by the Requirement Analyst)*	One alternative solution, other then those involve more manual work for developers/modelers, will be facilitating direct interaction of modeling tools with model or knowledge repository, allowing all metadata to be pulled to modeling tool and allowing developer/modeler to handle comparison/filtering/elimination of model components at the modeling tool level. One downside is, since modeling tools are not necessarily developed to support comparison (or help for doing so), the user may fail to identify the right model component he would choose otherwise.

8	Would you agree that we can summarize your requirement like this? *(Summarize one requirement in 2-3 lines and read back to interviewee for confirmation.)*	Browser (or browsers) that interact with Knowledge Repository and Model Repositories should allow comparison of different models (complete or partial) and various levels of semantic metadata such as data elements, object classes, value domains, concepts.
9	How important is this requirement to the interviewee? *Required: Customer Priority /Annotationrement Analyst* *(Provides concrete assessment of the relative importance for the requirements specification)*	1. Must have
10	On a scale from 1 to 3 with 1 being "not satisfied" to 3 "completely satisfied", how would you rate your overall satisfaction with the product if this requirement was met? *(Relative rating/ranking of how satisfied or dissatisfied interviewee would be if this requirement were met/not met)*	2. Mostly satisfied
11	Are there other requirements that you would like to share with us? I'd be more than happy to call you back another time, or if you have another 10 minutes, please share other issues you can think of. *(prompt to elicit any hidden - potentially higher priority requirements if they exist)*	The browsers that interact with Knowledge and Model Repositories should also support below as a complementary to the main requirement described above: • Selection/configuration of repository instances to use: In a federated environment, user should be able to choose /configure which model and/or knowledge repository instances s/he wants to use. • Search and discovery: The browsers should allow developers/modeler to be able to discover/search the model or metadata components. The searches can be against: -Project names -Model package names -Description of model components (classes/attributes) -Semantic annotation (concepts) -Value domains/permissible values -Any text field that is provided for the model or associated metadata (free text search) • Presentation of search results: The search results should: -Use color coding that makes them easy to read -Provide both textual (tabular) and graphical representation which can be selected per user's preference. Graphical representation is especially useful for visualizing Models and/or Model components. -Provide capacity to easily switch between model-centric or semantic metadata centric views. This should be supported for both graphical or textual representations. -Allow customization of the format, order and content (headings) of returned results. For instance user should be able to drop/add fields to from textual representation. -Rank results with different fields/attributes as requested. The default ranking should consider the level of "reuse" for any given component (DE, object class, VD, class name) to allow users to identify highly reused components easier. -Allow selection of the search results (partial or complete) for comparison -Allow selection of the search results (partial or complete) to be added in a shopping cart (basket). User should be able to export the shopping cart in XMI (if needed transformed to classes for modeling tool consumption) and an XML document compliant with ISO 11179 XSD.
12	Who else should we talk to in order to elicit more information about this need?	N/A
	For specific service enhancement or requirement from Forum entry:	
13	Can you or someone else give me a step-by-step description of how you would describe the expected performance/behavior of the software in order for you to feel that your requirement is met? *(Required: Fit Criterion - will help us create test cases and user acceptance criteria - to be prepared by the Requirement Analyst)*	When I search for metadata, I should be able to find the correct model components or data elements in the first page of the returned results (good ranking) • In the results view, I should be able to add/drop some of the fields, sort the results based on new fields overriding default ranking • In the results view, I should be able to switch to a graphical view (assuming default is textual) for model components • In the results view, I should be able to select components from the search results (no upper boundaries) and compare their content • In the comparison view, I should be able to upload my model (in a format produced by my modeling tool) and immediately see the common classes/attributes with respect to other model component that is already in the comparison view • In the comparison view, I should be able to add more than one model (under development) to visualize common points betwen my and other models • In the comparison view, I should be able to see the common classes and/or attributes (based on annotations) From results view and/or comparison view, I should be able to export selected classes (or CDEs) and export them (or translated versions if CDE) in XMI format to be able to import back to EA tool
14	Forum Link:	https://cabig-kc.nci.nih.gov/Vocab/forums/viewtopic.php?f=40&t=159
15	URLs (optional):	Links to pages or applications related to this requirement
16	References (optional):	Links to articles, papers or presentations related to this requirement