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All the ideas below arose from considering the SampLe framework for semi-automatic system for presentation creation described in SampLe paper. There a user is an active creator of the presentation, thus further I call her 'author'.

My vision on the underlying meta-data structures is the following. There are 3 ontologies: domain ontology, narrative structure ontology and media ontology. The domain ontology consists of schema and the instantiation (schema: Class:movement, instantiation: movement:'De Stijl'). The actual media items are annotated with the concepts from the schema and the instantiation, concepts from narrative structure ontology and media ontology.

Presentation structures are stored separately (in xml format). Building template presentation structures is a starting point for verifying the completeness of ontologies (knowing what content is present in the template annotation structures we can verify whether we have corresponding annotations). Current assumption is that presentation structures during presentation building process are built and altered in the following way:

1. template presentation structures (indexed by domain ontology, narrative structure ontology and media ontology) distinguishable by the main character (a concept from the domain ontology schema, e.g. 'movement'), no related character is identified;
2. having the instance of the main character (a concept from the instantiation of the domain ontology, e.g. movement='De Stijl') the template structure can be adjusted based on the structure of domain knowledge ('De Stijl' activities include fine art, architecture, etc., thus extend the section 'Activities' with subsections 'De Stijl fine art', 'De Stijl architecture', etc.);
3. having the instance of the related character (movement=Cubism) the structure is adjusted further based on domain knowledge;
4. an author can alter the resulting structure.

The manipulation of media items happens at several stages of the presentation building process: alteration of the proposed structure, selection of the material from the set retrieved for a specific section (if an author chooses certain items we can potentially assume that there are implicit semantic relationships between these items), and ordering the material. In all these cases we have at least some information that can help the system to enrich the database with new relationships between items (basically this information is taken from the context). [The definition of *context* is still to be clarified].

By building logical structures of presentations in the way where each section of the presentation is described in terms of domain ontologies we are doing the mapping between presentation structures (narrative) and domain knowledge. By building the link between the outer and the inner context discussed below we basically build a mapping between user profile and domain knowledge.

Understanding and support of user actions is the basis for support of going back in the process of presentation building with a semi-automatic system. The notion of context lies in the base for understanding user actions for the system. The context is understood by users as a purpose, actions and circumstances of the fulfillment of the certain process. This notion of context can be transformed into the knowledge structures understandable by machines. This means that the notion of context has two facets: the outer context and the inner context. The same current context can be represented in either way, in other words the mapping exists (or should exist or be found) between outer and inner context. On the one hand we have a set of user goals, actions, roles and tasks, which express user motivation for fulfilling

a task and circumstances under which this task is performed. On the other hand knowing the outer context can help the system to make decisions where alternatives are possible (as to choose between two rules which are possible to apply), thus the outer context is processed and reflected on the underlying knowledge structures of the system.

[I'm not going to research the outer context (in our project this is Vadim's part), this was explained because aspects of the outer context influence my work]

An author performs all the actions and changes in the certain context. In the simplified case (or the primary context) it is the context of building the current presentation with the certain genre, characters and with the certain primary structure (with (not) straightforward elaboration). Even if not specified by an author these data might be enough to make an assumption about the purpose of building this presentation and intended audience. Further as more data is reviewed or selected by an author, more information the system will have about the outer context of the work and more helpful suggestions can be made. Thus, at each step user actions should be observed and interpreted. But since all the conclusions made by the system will remain hypothetical the system should make a maximum use of the domain knowledge.

Adjusting the presentation structure to the main/related character

Adjusting the structure to the main character is easier, since it can be enough to extend the template structure with sections corresponding to the structure of the domain ontology. Adjustment to the related character is more complicated and can include a lot of rules if-then.

Altering the presentation structure

Altering a template presentation structure by an author can affect the set of rules the system is using to adjust this structure to the main/related character. The context can help to understand the importance weights of certain material with regard to the other.

Selecting items for a particular section

The name of the section together with the specification of the required narrative structure and media type are used to retrieve a set of items for this section. An author selects items to use in the presentation. It is possible that among the items selected will be those that have no relationships identified in the database. But since they are selected for one section the system can assume that certain relationships should exist between them. Then it can be proposed to the user to enter new relationships between items.

Ordering items

The absence of specified domain relationships between items comes even more important at the stage of ordering items into a coherent story for each section of the presentation. Without knowing the relationships the system would not be able to place items in the story.

Ignored for now! - Adding new items (absolutely new to the database, adding a part of an existing object as a separate object, adding new relationships between items) – interesting topic by itself.

In the case when an author wants to add a new item to the database (not a part of an existing one), it is not possible to make any assumptions for annotations automatically. In the same time, it is not possible to give any user a freedom to enter annotation by himself. Even the experienced person would have problems with annotating new items since first it's difficult to grasp all the concepts from the large ontology which should be used for annotating this particular item, and

second it’s easy to make mistakes. Thus, I should find a way where by asking some guidelines from an author the system can create new annotations.