

Descriptive Semantic Annotations for Science Media Repositories [1]

Submitted by kxu on Wed, 2014-12-31 14:39 **Event:** [Winter Meeting 2015](#) [2]

Abstract:

Inspired by the grammatical structure of common, everyday English, we develop a structured tagging language around nouns, verbs, adjectives and adverbs, for describing the content of multimedia resources in terms of the objects and interactions depicted. It has better expressive power than prevailing free-text-based methods such as captions or keyword tagging, enabling more detailed descriptions and more specific queries, and thereby improving the quality of search results. The language structure is defined in RDF Schema, providing extensibility as well as interoperability with existing semantic web technologies, while achieving greater ease of use and understanding compared to complex ontology-based approaches, thanks to its inspiration from natural (human) languages. We believe that large repositories of science data and multimedia can benefit from this combination of structured representation, expressive power, and user friendliness, making data more readily accessible, discoverable and usable.

Collaboration Area: [Discovery](#) [3]

[Information Technology and Interoperability](#) [4]

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The poster is titled "Descriptive Semantic Annotations for Science Media Repositories" and is from USC Viterbi. It is divided into several sections:

- Making large repositories of multimedia readily accessible, discoverable and usable:** Discusses the need for a common vocabulary and the development of a structured tagging language.
- Inspired by common, everyday English grammatical structure:** Explains how the language is inspired by natural language grammar, using examples like "A bird is sitting on a nest" to show how words map to entities and relationships in an RDF Schema.
- Tag hierarchies and implied tags:** Shows a hierarchy of tags (e.g., "bird" -> "nest") and how implied tags can be used to describe relationships.
- Current state of metadata:** Lists various metadata standards (e.g., Dublin Core, DCMI, PURL) and their limitations.
- Annotation server architecture:** A diagram showing the interaction between a client and a server, with the server storing annotations and providing them back to the client.
- Other potential applications:** Lists uses such as "User-driven metadata" and "Image-based metadata".
- Main decisions:** Lists key design choices, such as using a simple grammar and supporting a wide range of media types.
- Ongoing & future work:** Lists tasks like "Get feedback from users" and "Integrate with existing systems".
- Acknowledgments:** Credits the funding source and other contributors.

Images:

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