

Reflections on Image Annotation on the Semantic Web

Comments on the version “Editor’s Draft” (4 Sept 2006) at
http://www.w3.org/2001/sw/BestPractices/MM/image_annotation.html

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Typographic errors and minor suggestions

- Typo in section 2.1; paragraph 1; final sentence: “Trade offs along several dimensions make ~~the~~ professional multimedia annotations difficult” (remove ‘the’)
- Section 2.1; point 1; 4th sentence: perhaps remove “Indeed, maybe the single most best practise in image annotation is that” since it’s not needed. Alternatively change it to make it clearer what early annotation is “best” at – is it more effective, more efficient, cheaper, less labour intensive, more accurate?
- Section 3; second last paragraph; point 2; second sentence could be more clearly expressed as: “The drawback of this strategy is that different annotations of a single region each need to redefine the region’s border.”
- Section 3; second last paragraph; point 1: there is also a drawback to this approach in that all possible segmentations have to be contained in the image format. How could you define a collection of regions (e.g., the family group in a photo as opposed to the individual people or the golgi stack as opposed to the regions that make up the golgi stack). The second approach does provide a level of application independence.
- Section 5.2, "Copyright and origin of metadata" example change the link http://www.metmuseum.org/Works_Of_Art/viewOne.asp?dep=11&viewmode=1&item=67%2E241§ion=description#a use & instead of & according to XML Recommendation (2.4) [mm]
- Typo, Section 6; first paragraph; 3rd sentence: “machine” should be “machines”
- Typo, Section 6; first paragraph; 4th (final) sentence: “have significant advantages in applications areas” should be “has significant advantages in application areas”
- Typo, Section 6; last paragraph; 3rd sentence: “withing” should be “within”

Expounding the benefits of the semantic web

Based on the stated objectives and audience of the document, a little more “salesmanship” (within limits of course) would be good. Why do Semantic Web technologies make addressing the issues listed in section 2.1 any easier than using existing natural language/tagging/relational database solutions?

Some possible reasons (for discussion) may include:

- Syntactic interoperability;
- Semantic interoperability, specifically:
 - External, independent definition of semantics;
 - Formal, machine-processable semantics;
 - Networking and re-use of semantic definitions;
- Generic tools result in annotations that are more application independent than equivalent free text or relational schema solutions would be;
- Ability to specify metadata relating to different levels (object, region, domain, feature, provenance etc.) using externally defined and agreed upon semantics;
- It’s possible that the flexibility of tools based on semantic web technologies make it easier to integrate them with existing solutions and to extend capture, analysis and production tools to record better metadata for annotations (unproven).

Interestingly in section 2.2 the sentence that is describing the example image, “There is an image `Ganesh.jpg` created by `Jeff Z. Pan` whose title is `An image of the Elephant Ganesh`”, is itself a very good example of how the semantics of natural language can be inexact. On a first reading of the sentence the reader could interpret “whose title” as referring to “Jeff Z. Pan”. That is that “Jeff Z. Pan” has_title “An image of the Elephant Ganesh” – an odd university degree perhaps? The RDF description makes the relationships clearer. A good example of how Semantic Web technologies are an improvement over free text annotations.

Overall, the use cases work really well as illustrations of what is possible and how current technology can be used in different ways. It may be valuable to make more explicit the intended use of the annotations and the way in which semantic web technologies enable these applications.