J.UCS Sample

Anna Musterfrau
(Example University, city, state
https://orcid.org/0000-0000-0000-0000, anna.musterfrau@example.at)

Max Mustermann
(Example University, city, state
https://orcid.org/0000-0000-0000-0000, max.mustermann@example.at)

Abstract: A short and pregnant description of the content and intent of the article. Please try to avoid mathematical symbols and special characters as much as possible. Make sure the heading of the article, the names of the authors and their affiliations are formatted as shown above. State the names of the city and country in the affiliations.

1 Introduction

Make sure the headings are correctly formatted throughout the article ...

2 Existing Video Annotation and Retrieval Systems

A variety of projects have designed and implemented multimedia retrieval systems. The focus is on covering multimedia databases, meta-data annotation, specialized multimedia analysis methods and web-based front-ends. A special focus had been laid on projects and systems already using MPEG-7 or providing extended retrieval features. In addition to the usage of MPEG-7 it was important to analyse the level of semantic, that can be described and used... The first step of annotation is an automatic shot detection tool that recognizes dissolves and fades to detect scene cuts. A couple of key frames for each shot is used to represent the content of each shot. Content description in form of meta-data can be added to each shot by selecting entries from the tree view. The entries are described in MPEG-7 and can be loaded from a separate file to use customized lexicons. Each shot can interactively be annotated with object descriptions, event descriptions, other lexicon sets and own keywords. Finally the annotated video description is saved as MPEG-7 XML file. A lexicon is an MPEG-7 based definition of application dependent description components, that has no standardised format...

2.1 History

Hypermedia has become a concept familiar to many people ... The term structural computing was coined to describe this unification of various hypermedia variants within a common framework [Nürnberg et al. 1997].

We can reference tables just like images. Here is an example of a reference to Table 1.

Label	Type	Relation	Target
Soccer Player #1	SoccerPlayerType	patientOf	Event red card
Referee	SoccerRefereeType	agentOf	Event red card
Event red card	EventType		

Table 1: Make sure the table stays within the printing area. Allow space before the table. The table caption must be formatted in the same way as the figure captions, i.e. italics, 10pt, with 12pt empty space before and after the table caption

2.2 Comparing data- and structure-based approaches

Structural computing environments are distinguished by their focus on the construction and management of structural abstractions ...

This realization significantly complicates certain otherwise well-understood problems....
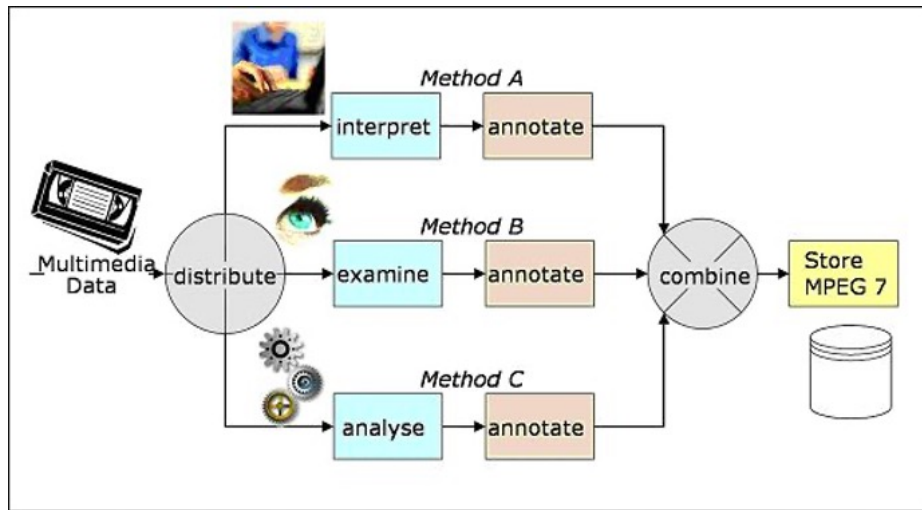

Figure 1: Make sure the captions are italics, centred

Similar examples of structural complications in version control and access control Our ma have been discussed at length within the hypermedia and structural computing communities (e.g., [Hicks et al. 1998, Nürnberg et al. 1996]).

2.3 Current status

There is much ongoing work within the structural computing field (see, for example, the proceedings of the last three workshops on structural computing [Anderson and Reich 2000, Nürnberg 1999, Reich et al. 2001]). Two modern structural computing systems are Callimachus [Christodoulakis et al. 1999] and Construct [Wiil and Nürnberg 1999].... It is a codebase successor to three lines of hypermedia research systems – specifically, DHM

[Grønbæk and Trigg 1994], HOSS [Nürnberg et al. 1996], and HyperDisco [Wiil and Leggett 1996]. Both the Callimachus and Construct systems implement a wide variety of structural services. Recently, a metadata service, allowing the tagging of WWW pages with arbitrary metadata records, has been added to Construct [Neveu et al. 2001].

3 Metadata as first-class structure

Metadata is not simply data ...

Secondly, a given metadatum may be related to more than one datum. For example, two data that share identical authors may both be related to an identical author metadatum. This "transclusion" [Nelson 1993] model of building metadata references is atypical – generally, two metadata records for data that share identical authors simple both share, for example, identical text in an author key field. At one level of abstraction (e.g., the user interface), this model of metadata may be useful – a metadata browser may want that matadata presented as keyword/value pairs. However, from an implementation perspective, the keyword/value pair model is a poor choice. It makes several types of operations, such as updating information (e.g., "change all instances of Joe Public to Joe Q. Public"), querying for related information (e.g., "find all articles authored by Joe Q. Public"), or differentiating information (e.g., "which of the three authors named Joe Q. Public authored this article?") unnecessarily difficult...

4 Generalized first-class metadata management

In this section, we present some brief examples of how implementing metadata management... The implementation and implications of such examples are described at greater length elsewhere (e.g., [Hicks et al. 1998, Nürnberg et al. 1996]).

4.1 Data mining

If metadata are treated as structure ...

4.2 Adaptive systems

When structures (both metadata itself, and the structure that binds it to data) are treated as first-class, they may then be manipulated as any data object, including being tagged ith attriubute/value pairs and being versioned. Both of these characteristics are very useful in adaptive systems [Schraefel 2000]...

5 Conclusions and Future Work

Until recently, focus in metadata research has focused on what metadata is and how it should be represented to the user. However, there has been a lack of focus on how it should be managed at a system level. We have shown that treating metadata as simple data out of the context of the relationships to which it belongs, and which it defines, although the current default model, is insufficient. We advocate borrowing structure management techniques from fields such as structural computing to manage metadata more effectively.

Acknowledgements

References

[Anderson and Reich 2000] Anderson, K., Reich, S. (eds.): "Proceedings of the Second Workshop on Structural Computing"; Lect. Notes Comp. Sci. 1903, Springer, Berlin.

[Christodoulakis et al. 1999] Christodoulakis, D., Vaitis, M., Papadopoulos, A., Tzagarakis, M.: "The Callimachus approach to distributed hypermedia"; Proc. 10th ACM Conf. Hypert., ACM, New York (Feb 1999).

[Grønbæk and Trigg 1994] Grønbæk, K., Trigg, R.: "Design issues for a Dexter-based hypermedia system"; Comm. ACM 37, 2 (Feb 1994), 40-49.

[Hicks et al. 1998] Hicks, D., Leggett, J., Nürnberg, P., Schnase, J.: "A hypermedia version control framework"; ACM Trans. Inf. Sys., 16, 2 (Apr 1998l) 127-160.

[LOC 2000] Library of Congress: MARC 21 specifications for record structure, character sets, and exchange media. (2000) http://www.loc.gov/marc/specifications/spechome.html.

[Marshall et al. 1994] Marshall, C., Shipman, F., Coombs, J.: "VIKI: spatial hypertext supporting emergent structure"; Proc. 1994 Euro. Conf. Hyperm. Tech. (Sep) 13-23.

[Martinez 2002] Martinez, J.: "Coding of moving pictures and audio: Overview of the MPEG-7 standard (version 6.0)" ISO/IEC JTC1/SC29/WG11 N4509 (2001) http://mpeg.telecomitalialab. com/standards/mpeg-7/mpeg-7.htm

[McCall et al. 1990] McCall, R., Bennett, P., D'Oronzio, P., Ostwald, J., Shipman, F., Wallace, N.: "PHIDIAS: Integrating CAD graphics into dynamic hypertext"; Proc. 1st Euro. Conf. Hypert. 1990 (Nov), 152-165.

[Nelson 1993] Nelson, T.: "Literary Machines"; Mindful, Sausalito, CA.

[Neveu et al. 2001] Neveu, Y., Guervilly, Y., Wiil, U., Hicks, D.: "Providing metadata services on the World Wide Web" Tech. Rep. CSE-01-01, Dept. Comp. Sci. & Eng, Aalborg U. Esbjerg, (Mar) http://www.cs.aue.auc.dk/publications

[Nürnberg 1999] Nürnberg, P. (ed.): "Proceedings of the Workshop on Structural Computing (SC1)". Technical Report CSE-99-04, Dept. Comp. Sci. & Eng., Aalborg U. Esbjerg, (Feb) http://www.cs.aue.auc.dk/publications

[Nürnberg et al. 1998] Nürnberg, P., Wiil, U., Leggett, J.: "Structuring facilities in digital libraries"; Proc. Euro. Conf. Dig. Lib. 1998 (Sep).

[Nürnberg et al. 1997] Nürnberg, P., Leggett, J., Schneider, E.: "As we should have thought"; Proc. ACM Hypert. '97, ACM, New York (1997).

[Nürnberg et al. 1996] Nürnberg, P., Leggett, J., Schneider, E., Schnase, J.: "HOSS: a new paradigm for computing"; Proc. 7th ACM Conf. Hypert, ACM, New York (Mar 1996) 194-202.

[Reich et al. 2001] Reich, S., Tzagarakis, M., De Bra, P. (eds.): "Proceedings of the Third Workshop on Structural Computing"; Lect. Notes Comp. Sci. 2266, Springer, Berlin.

[Schraefel 2000] Schraefel, M.: "ConTexts: Adaptable hypermedia"; Proc. Adapt. Hypermedia and Adapt. Web-Based Sys. Int. Conf., Lect. Notes in Comp. Sci. 1892, Springer, Berlin (Aug 2000), 369-375.

[Wiebel et al. 1998] Weibel, S., Kunze, J., Lagoze, C., Wolf, M.: "Dublin Core metadata for resource discovery"; IETF RFC 2413 (1998) http://www.ietf.org/rfc/rfc2413.txt

[Wiil and Leggett 1996] Wiil, U. Leggett, J.: "The HyperDisco approach to open hypermedia systems"; Proc. ACM Conf. Hypert. 1996, ACM, New York (Mar), 140-148.

[Wiil and Leggett 1992] Wiil, U. Leggett, J.: "Hyperform: Using extensibility to develop dynamic, open and distributed hypertext systems"; Proc. 4th ACM Conf. Hypert., ACM, New York (Nov 1992), 251-261.

[Wiil and Nürnberg 1999] Wiil, U., Nürnberg, P.: "Evolving hypermedia middleware services: Lessons and observations"; Proc. ACM Symp. Appl. Comp., ACM, New York (Mar 1999).