SMIL, Flash, SVG, Macromedia Director, GrinsEd, Flash Editor

semantic-preserving and semantics-enriching multimedia authoring

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Authoring of personalized multimedia content

Process of selecting, composing, and assembling media elements into coherent multimedia presentations that meet the user’s or user group’s preferences, interests, current situation, and environment

Multimedia personalization approaches today
Exploit the semantically rich metadata information of the media elements for the selection and composition task

However, this highly valuable source of information is currently lost
Structured multimedia documents

Diagram:

1. Spatial Projector
2. Title
3. Parallel
4. Sequential
5. Parallel
6. Text 2
7. Spatial Projector
8. Parallel
9. Spatial Projector

Slide 1
Text 1
Slide 2
Emergent Semantics when authoring

- Friend’s image with GPS position
- Smaller, less important images
- Large, important image in the center
- Learned topic and GPS position

Our Vacation on Island Norderney
Example

- emergent semantics
  - Learn the title of the page from the user with a certain reliability

```xml
<dc:title>
  <rdf:Description>
    <me:value>Schöne Dünen</me:value>
    <me:source>User</me:source>
    <me:reliability>100</me:reliability>
    <me:creation_time>1163431913391</me:creation_time>
  </rdf:Description>
</dc:title>
```
what is needed?

what is lost?

- Structural information is hidden in the format of the presentation
- the authoring environments do not created any kind of content description
- Emergent semantics when authoring

what is needed?

- Making discourse and structural information explicit for search and access to document and fragments
- Semantic description of the content, the use of the document, audience, technical requirements, ....
Existing Standards

LOM - Learning objects metadata
  - targeted for learning entities
SMIL Metadata Module
  - open to everything
  - allows reference from metadata in the header to elements in the body
CULTOS Project
  - Intertextual threads; EMMOS, EMMA; Univie, SR
MPEG-7?
MPEG-21?
  - DI authoring (Kosch, Passau; Leopold)
HyTime?
TV News has the same problem
Scalable Presentation Format
  - maybe extensible
TV AnyTime?
Automated Generation Presentation -> use the rule to derive semantic description
Interoperability problem

Multimedia document hide almost everything

- No description for search
- Creating a new complex media element but make them opaque

an annotation problem as well as an interoperability