

*Advene:
active reading through hypervideo*

Olivier Aubert -Yannick Prié
LIRIS - Université Claude Bernard Lyon 1



Outline

- Audiovisual Information Systems for scholars
- The hypervideo model
- The Advene project
 - The Advene model
 - The Advene prototype
 - Views in Advene
 - Active Reading
- Ongoing work – Conclusion

Audiovisual Information Systems for Scholars

- Various uses of AV documents
 - personal notes / work documents, pedagogical tools, testimony of the past, work of art, communication acts, ...
- Basic interaction
 - text transcriptions and notes
 - simple video navigation
- Tools should
 - accommodate the variety of needs in metadata structure and visualisation modalities
 - allow to share and adapt both structured metadata and visualisations

A hypervideo model to...

- Analyse existing innovative uses of audiovisual document
- Provide guidelines to build new hypermedia systems

The hypervideo model

Audiovisual Document AVD

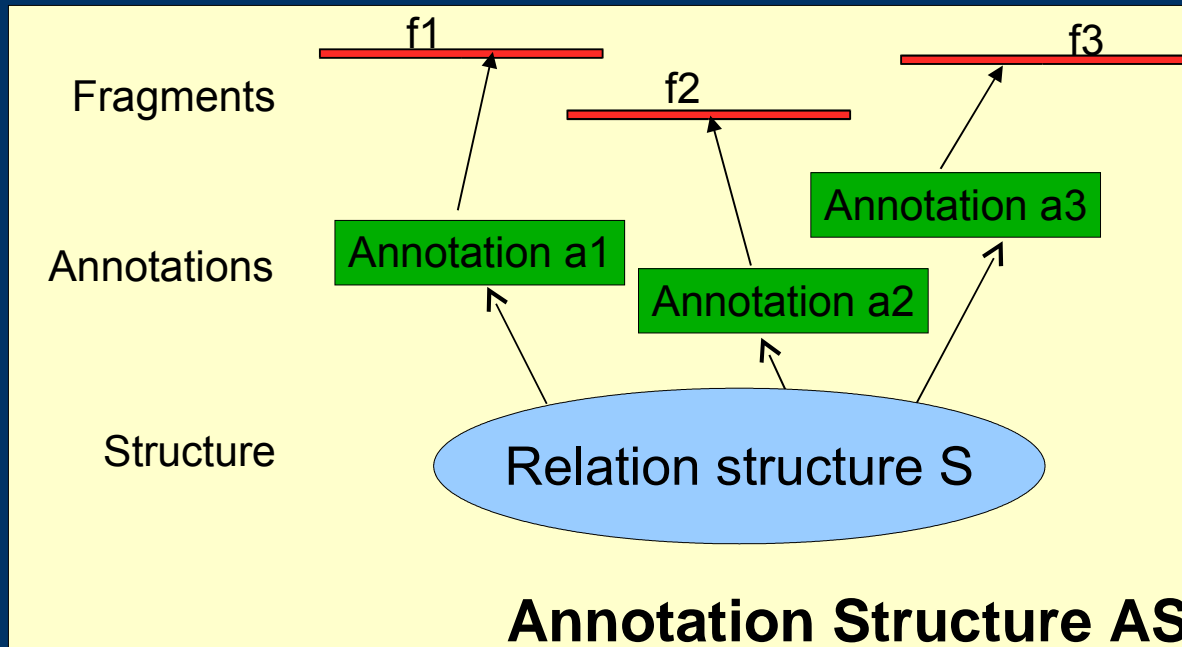
t



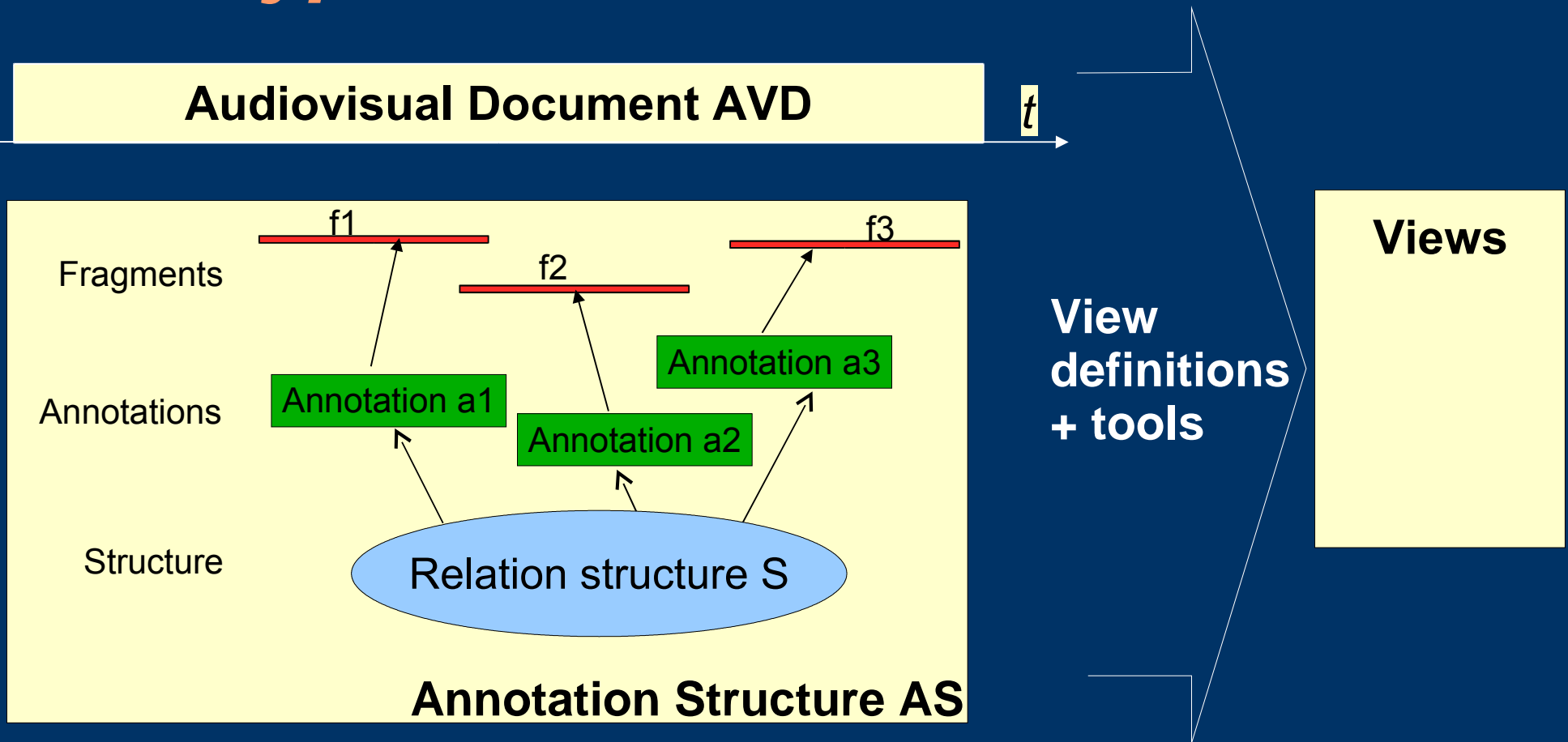
The hypervideo model

Audiovisual Document AVD

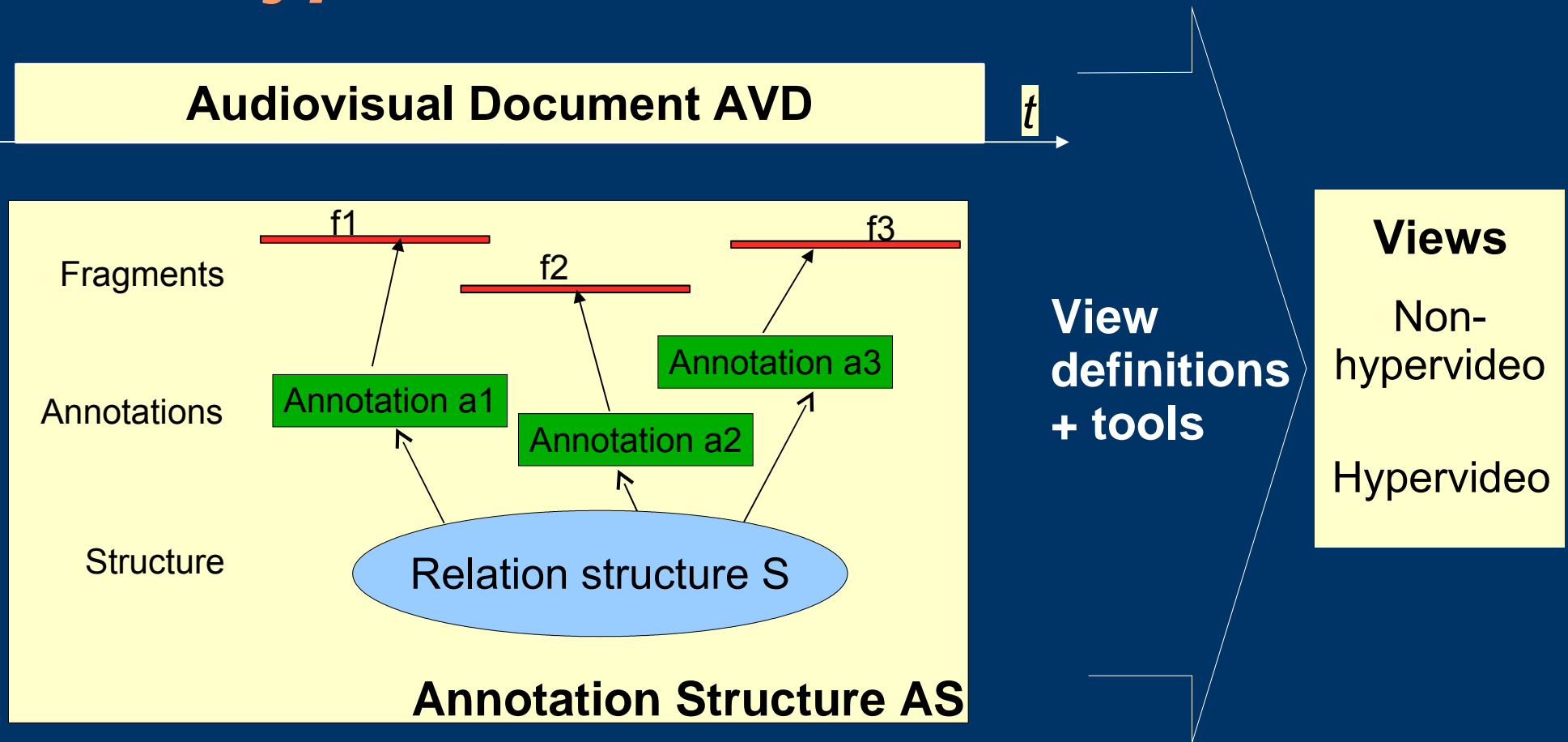
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The hypervideo model

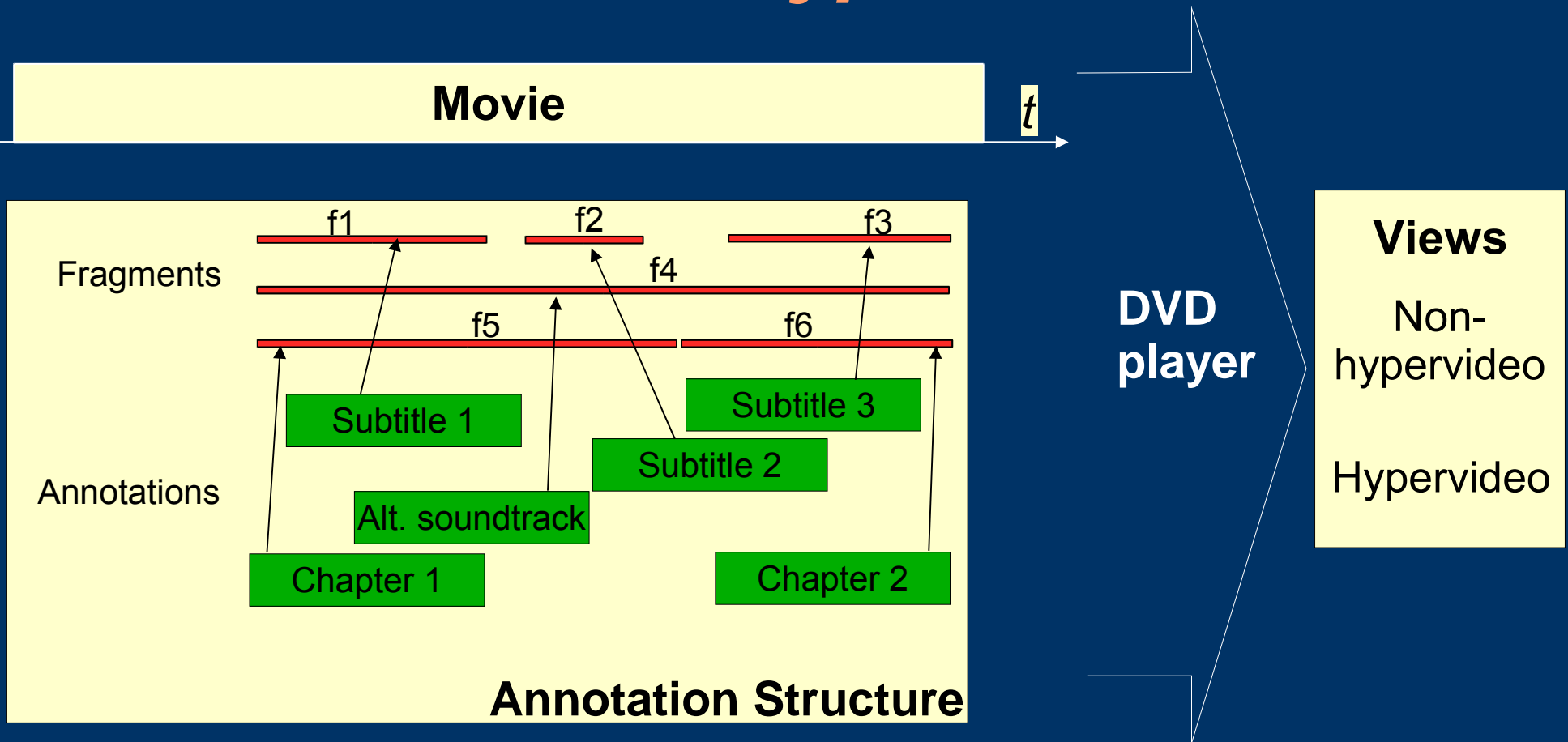


The hypervideo model



Hypervideo: view that 1/ uses information from **both** the AV document **and** the annotation structure and 2/ gives access to the AV document temporality

A DVD seen as a hypervideo



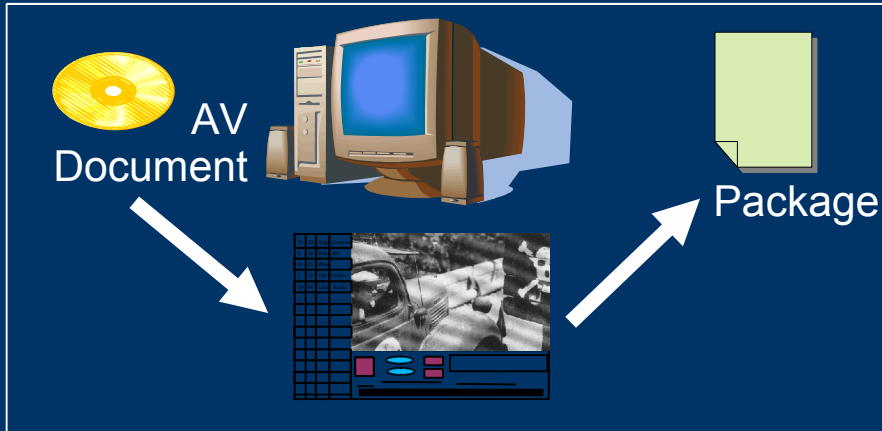
Non-hypervideo views: plain movie, printed chapter list

Hypervideo views: subtitled movie, direct access to chapters

The Advene project

- « advene: to be added to something or become a part of it, though not essential » (Webster 1913)
- Annotate Digital Videos/DVds, Exchange on the NEt
- Data model + prototype
 - Open-source, cross-platform
 - Reuse off-the-shelf components (VLC, ZPT, web browser)
 - Rapid development (python)
 - Testbed for experiments
- Research platform
 - new audiovisual interaction modalities
 - user-lead innovation

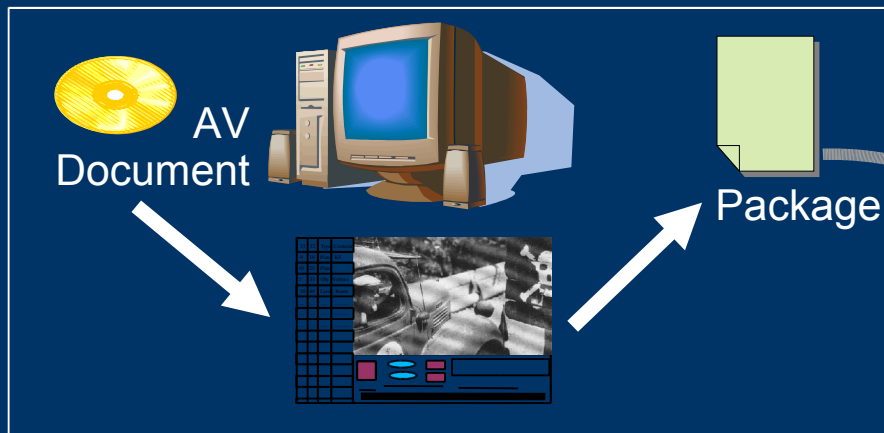
Principle



Package creation
(definition of annotations and views)

- **Annotate videos**

Principle



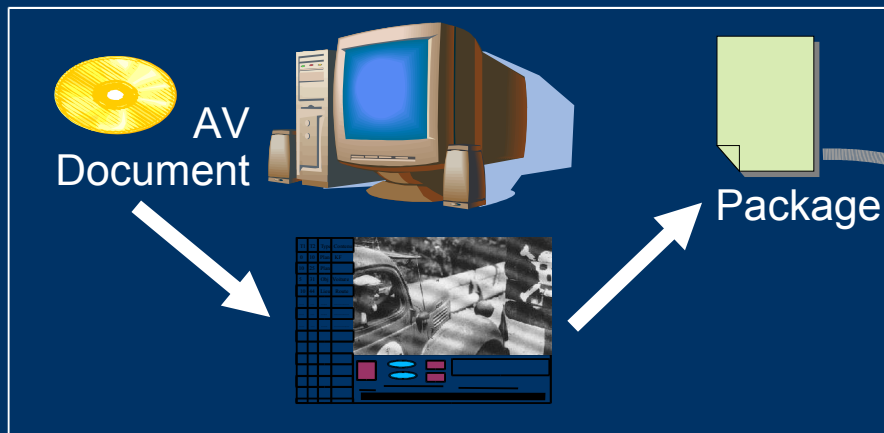
Package sharing :

- copy through webservice, e-mail, etc.
- reference through imports

Package creation
(definition of annotations and views)

- Annotate videos
- **Share metadata and analyses**

Principle

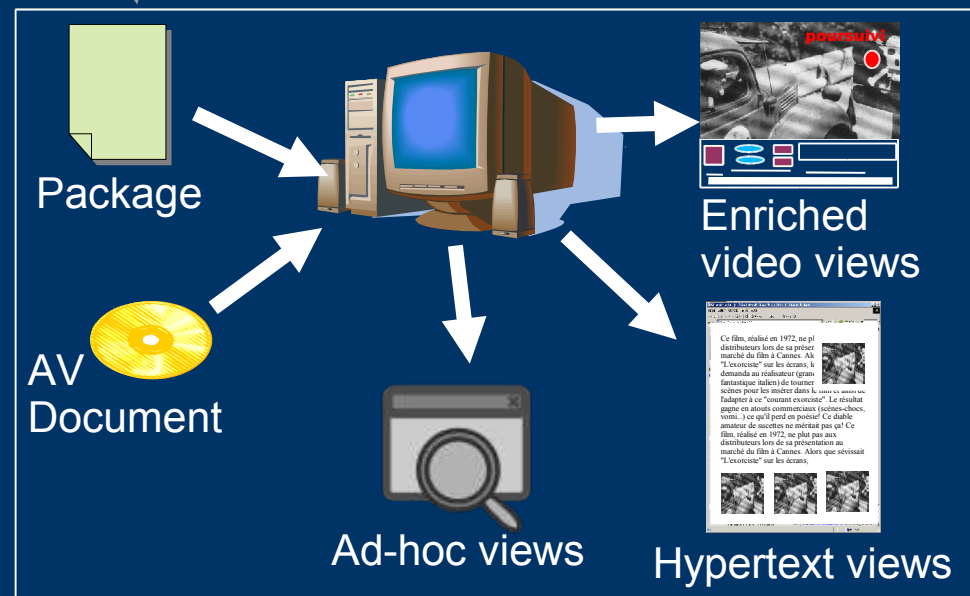


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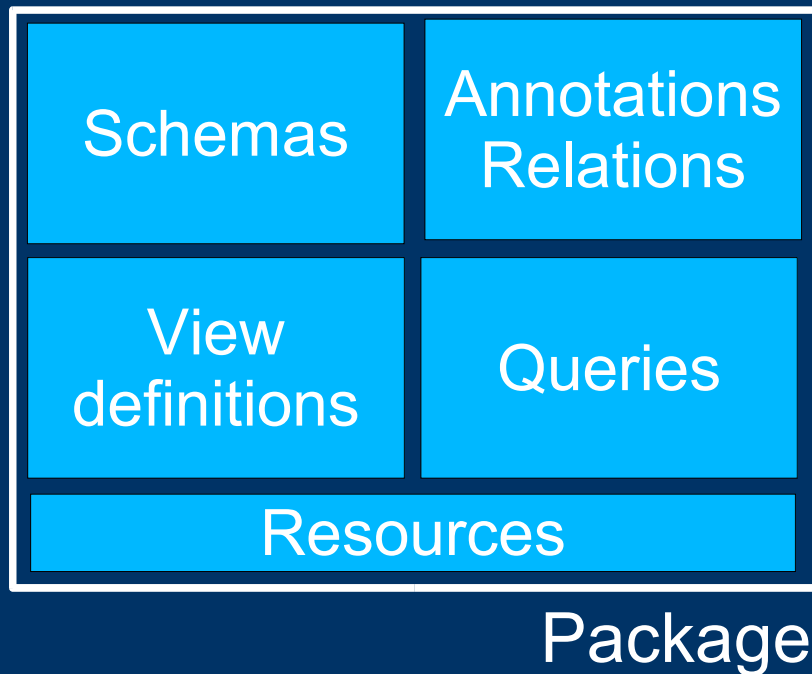
Package creation
(definition of annotations and views)

- Annotate videos
- Share metadata and analyses
- **Visualise the metadata in user-specifiable ways**

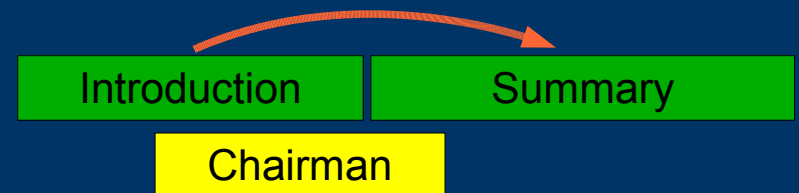
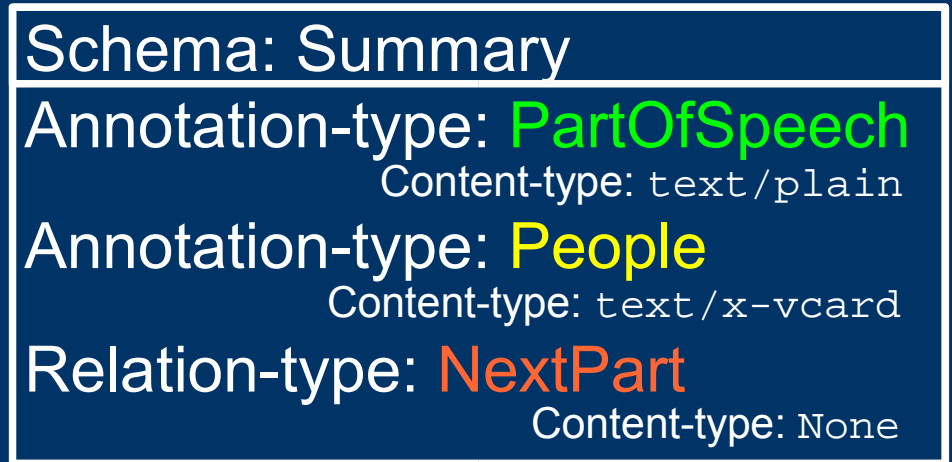


Package utilisation
(visualisation, enrichment)

The Advene data model



Example :

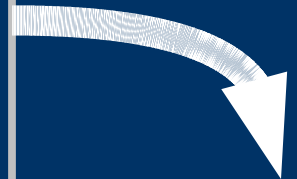


Element addressing with TALES (ZPT) :

```
package/annotationTypes/PartOfSpeech/annotations/first  
annotation/content/data  
annotation/fragment/duration
```

Static (hypertext) views

```
<h2>The different parts of the speech:</h2>
<ul>
  <li tal:repeat="a
here/annotationTypes/PartOfSpeech/annotations"><a
tal:attributes="href a/player_url"><img alt=""
tal:attributes="src a/snapshot_url" /><span
tal:content="a/content/data">Name</span></a> (<a
tal:attributes="href string:${a/absolute_url}/
view/S_part_details">Details</a>)
</li>
</ul>
```



The different parts of the speech:

-  False start (Details)
-  Salutations and flattery to the i
-  Dummy assistants of today (De

Template-based X(HT)ML generation (ZPT)

Links to the video and views (ad-hoc, static)

Images extracted on the fly

Dynamic (enriched video) views

- Event-Condition-Action paradigm
- View = set of rules
- Example: if the event *Beginning of annotation* occurs (event) and the annotation type is *PartOfSpeech* (condition), then display the part title as a caption and a navigation popup to go to the next and previous part (action).



Events	Conditions	Actions
<ul style="list-style-type: none">- Annotation start/end- Player start/pause- ...	<ul style="list-style-type: none">- Allen conditions- Order, inclusion- ...	<ul style="list-style-type: none">- Basic player control- Advanced player control- GUI actions (popups, ...)

Dynamic view rendering

The screenshot displays the Advene software interface for video playback and navigation. The window title is "Advene - Nelson HT03". The interface includes a menu bar (File, Edit, View, Player, Help), a toolbar with playback controls (play, stop, next, previous, full screen, etc.), and a status bar showing "Position 00:00:42.600" and "Status Playing".

Below the status bar, there is a section for "Edited annotation [None]" and "Annotation type Annotation texte".

The main interface is divided into several panels:

- Navigation history:** A list of video segments with timestamps and thumbnail images. The segments are:
 - 00:01:18.100 (red highlight)
 - 00:00:37.000
 - 00:01:21.800A "Clear" button is located below the list.
- Video Player:** A central window showing a video frame of a man in a dark suit. The caption below the video reads "Salutations and flattery to the invest".
- URL stack:** A list of URLs or annotations. The stack contains:
 - False start
 - Salutations and flattery to the inve:
 - Dummy assistants of todayA "Clear" button is located below the stack.
- Popups:** A section containing a "Navigation popup" with a small video thumbnail and text: "This is part 'Salutations and flattery to the investor audience'". Below it are two red buttons with text:
 - "Go to next part : 'Dummy assistants of today'"
 - "Go to previous part : 'False start '"

At the bottom of the interface, there is a log area with the following text:
16:58:56 - Found matching video file in moviepath: /home/oaubert/zzvideo_next_big_thing.mp4
16:58:56 - Loaded package Nelson HT03

Active Reading with Advene

- Note taking
 - On-the-fly note taking (timestamped)
 - Annotation assistants (automatic/semi-automatic generation)
- Annotation visualisation
 - Ad-hoc views, user-specified static/dynamic views
 - Document production
- Annotation processing
 - Schema evolution
 - Queries
- Collaboration
 - Package sharing (by copy or reference)

Conclusion

- Main Advene features :
 - flexible metadata structure
 - user-specifiable visualisations
 - metadata and visualisation specifications exchange
- Analysing and building systems with the hypervideo model

Ongoing work

- Prototype :
 - Usability issues (helpers, WYSIWYG editor, ...)
 - Common, reusable views and schemas definition (emergent discovery)
 - Package repositories creation
 - Schema evolution
- Collaborations (Incorporations, CRDP)
- Theoretical analyses (document temporalities, hypervideo perception, nature of document)

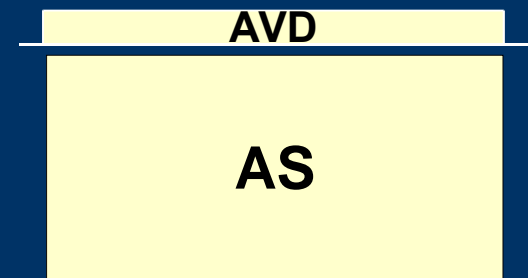
The end...

Thank you for your attention

The prototype is available from
<http://liris.cnrs.fr/advene/>

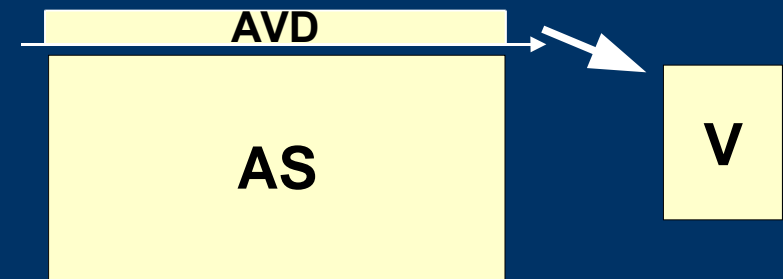
Views and hypervideos

- **Annotated AV document:**
 - **movie + shot/sequence decomposition**
- Non-hypervideo views
 - the movie alone
 - a plain table of contents
- Hypervideo views
 - Movie with
 - sequence title inserted on the video
 - links to the next/previous shot or sequence
 - Hypertext table of contents linked with the movie
- Hypervideo concept uses
 - Analysis of existing hypervideos
 - Guidelines to build new systems



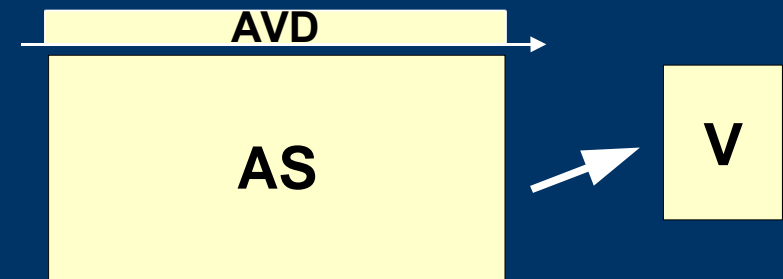
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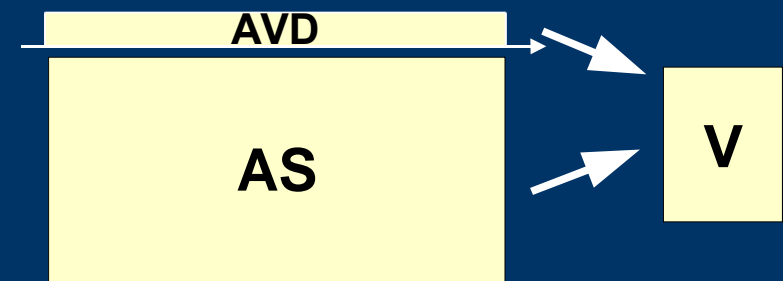
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Targeted categories of users

- Advanced users: creation from scratch
- Knowledgeable users: imitation
- Learning users: use of assistants and WYSIWYG editors
- Read-only users: simple visualisation