USING ADVENE TO ACCOMPANY RESEARCH IN AUDIOVISUAL DIGITAL HUMANITIES

Olivier Aubert - www.olivieraubert.net

PLAN

- The Advene project
- Use cases in Digital Humanities
  - REMIND method
  - AdA project
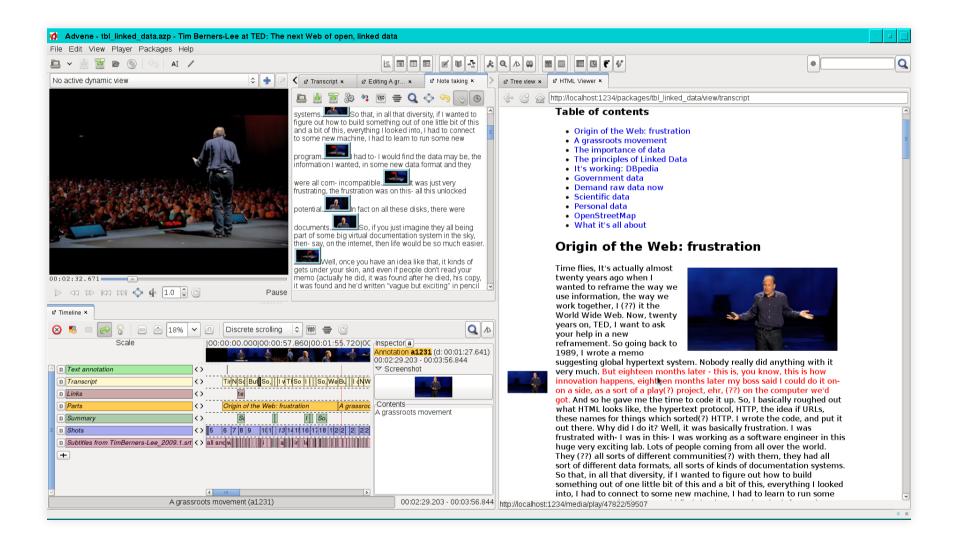- Conclusion

ADVENE PROJECT

Annotate Digital Video, Exchange on the NEt

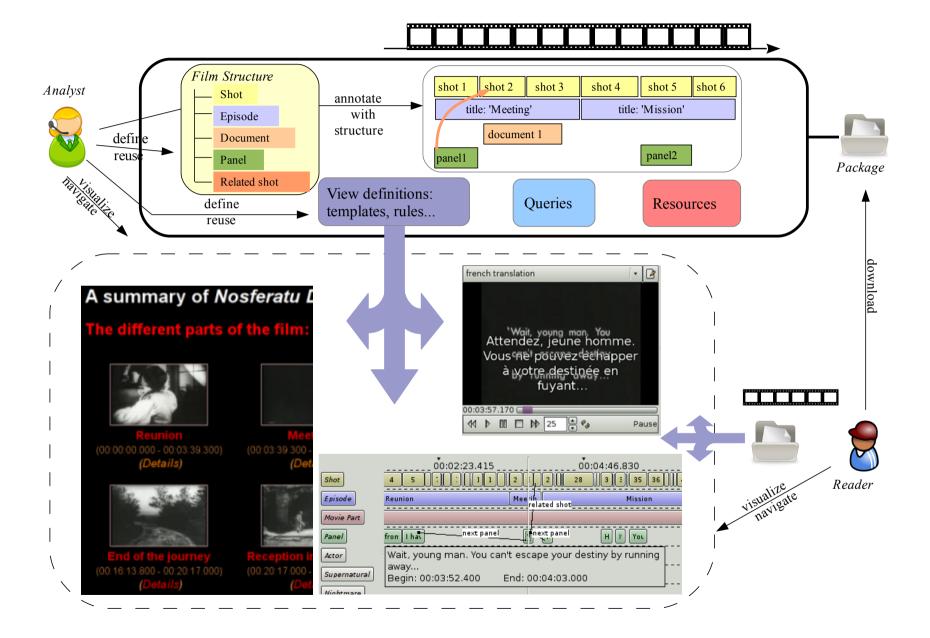*to be added to something or become a part of it, though inessential* (Webster, 1913)

- Accompany **active reading** of AV documents through annotations
- Create, user, share analyses of AV documents as hypervideos
- Started in 2002 with Yannick Prié and P.A. Champin
- Free Software (GPL) cross-platform desktop application (Python/Gtk/Gstreamer)
- www.advene.org

INTERFACE

PRINCIPLE

Analyst

Film Structure
- Shot
- Episode
- Document
- Panel
- Related shot

define reuse

visualize navigate

define reuse

annotate with structure

shot 1 | shot 2 | shot 3 | shot 4 | shot 5 | shot 6

title: 'Meeting'

title: 'Mission'

document 1

panel1

panel2

View definitions: templates, rules...

Queries

Resources

Package

download

A summary of *Nosferatu*

The different parts of the film:

Reunion
(00:00:00.000 - 00:03:39.300)
(Details)

Mee
(00:03:39.300 -
(Det

End of the journey
(00:16:13.800 - 00:20:17.000)
(Details)

Reception i
(00:20:17.000 -
(Det

french translation

'Wait, young man. You
Attendez, jeune homme.
Vous ne pouvez échapper
à votre destinée en
by running away...
fuyant...

00:03:57.170

25 | Pause

Shot | 4 | 5 | 1 | 2 | 2 | 28 | 3 | 35 | 36

Episode | Reunion | Meetin | Mission

Movie Part

Panel | fron | I hav | next panel | next panel | H | I | You

related shot

Actor | Wait, young man. You can't escape your destiny by running away...
Begin: 00:03:52.400   End: 00:04:03.000

Supernatural

Nightmare

00:02:23.415

00:04:46.830

Reader

visualize navigate

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SCIENTIFIC CHALLENGES

- Knowledge engineering
- Document engineering
- HCI
- Dataviz
- Activity traces

FEATURES

- **User defined** structures and visualizations (templates, rules...)
- Preserve structured annotations as long as possible in the workflow
- A **package** is a set of (annotations, annotation structure, views, queries) independent from the video
- Generic data model. Use of text-based microsyntax.
    - import filters
    - no strict constraints
- Flexible and extensible (through plugins)
- Offline work

2 USE CASES IN DIGITAL HUMANITIES

- Interview analysis in museology : REMIND
- Systematic quantitative analysis and semantic annotation in media studies : AdA project

REMIND METHOD

Goal: study museum visitors' perception through video-based autoconfrontation

- Work by Daniel Schmitt (Univ. Valenciennes)
- Self-explicitation of visitors through replaying subjective recording of the visit
- Online publication of produced visualizations and raw data

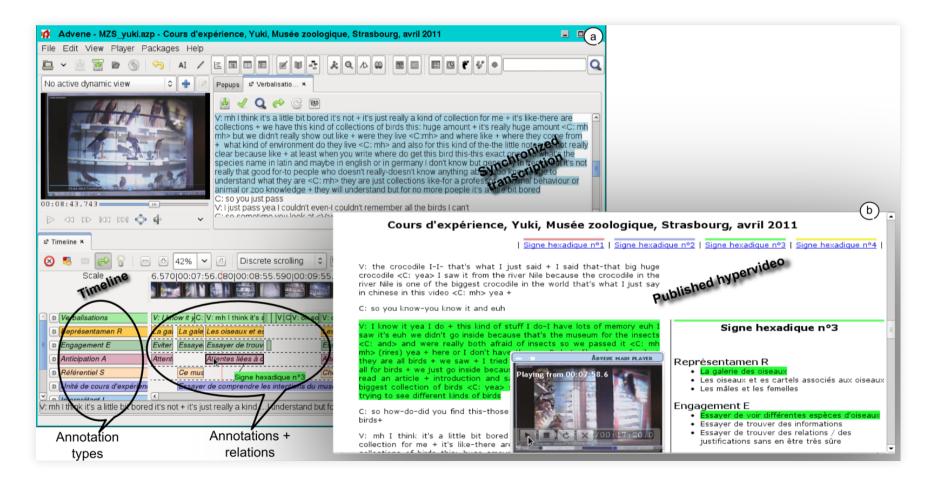# EXAMPLE: MUSEOGRAPHIE

Analysis process

- Transcribe interview (note-taking view)
- Identify hexadic signs (from course-of-action methodology)
- Use relations to express courses of experience
- Generate visualizations through templates
- Write analyzes
- Publish on the web

REMIND METHOD

Exploratory structuration / Publication of analyses as hypervideos

www.museographie.fr

ADA PROJECT

www.ada.cinepoetics.fu-berlin.de

- *Affektrhetoriken des Audiovisuellen* - Audio-visual rhetorics of affect
- Systematic-empirical study of staging patterns in audiovisual representations of the 2007 financial crisis
- Interdisciplinary collaboration: Cinepoietics (Media Studies, Freie Universität Berlin), HPI Potsdam (semantic web, video analysis)
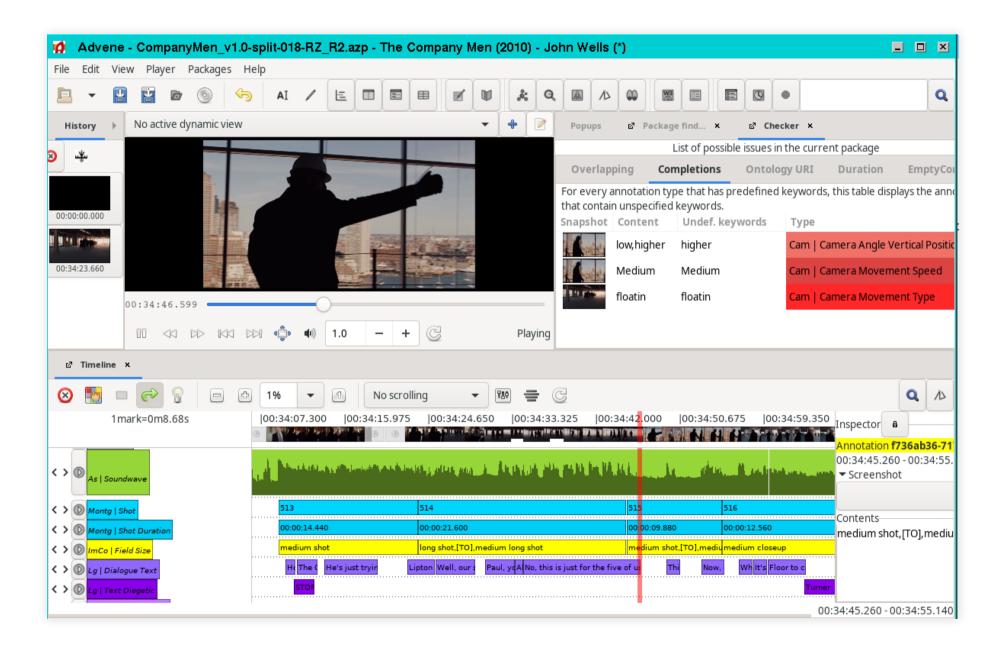
CHALLENGES AND NEEDS

Challenges

- Developing a methodological framework for analysis, with quantitative support
- Annotation content semantization
- Exploration of automation possibilities

Needs

- Build a ground truth for future automation
- Optimize the manual annotation process
- Provide a bridge between users and semantic data
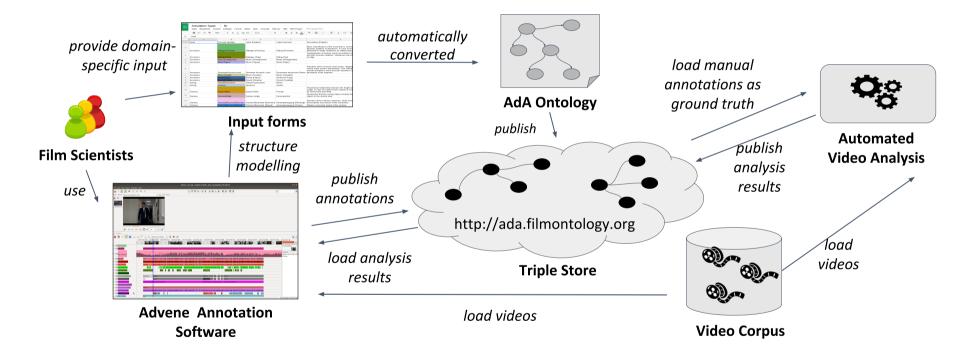
APPLICATION

PROCESS

- Exploratory modelling of an ontology through Advene schemas definition
- Conversion of initial Advene schemas into bootstrap ontology
- Conversion of OWL ontology into Advene schema
  - convert properties (URIs) into "local" vocabularies (folksonomies)
  - preserve URI/vocabulary mapping through metadata
- Non-blocking data validation feedback
- Export of information into an extended WebAnnotation model

PRINCIPLE

provide domain-specific input

automatically converted

AdA Ontology

load manual annotations as ground truth

Input forms

structure modelling

publish

Film Scientists

use

publish annotations

publish analysis results

Automated Video Analysis

http://ada.filmontology.org

load analysis results

Triple Store

load analysis results

Advene Annotation Software

load videos

Video Corpus

load videos

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PRODUCED ONTOLOGY (HPI)

ada.filmontology.org

- 8 annotation levels: Segmentation, Camera, Montage, Image Composition, Acoustics, Language, Bodily expressivity, Motifs
- 78 annotation types
- (currently) 86000 annotations over 5 movies and many TV reports
- CC-SA 3.0

DATA VISUALIZATION

visualization

ADVENE DEVELOPMENTS FOR THE ADA PROJECT 1/2

HCI

- Update code for adapting to new systems (esp. Python3/Gtk3/Gstreamer1)
- Performance improvements
- Constraint vocabularies support
- Data visualization

ADVENE DEVELOPMENTS FOR THE ADA PROJECT 2/2

- Improvements of fusion/import features for collaboration
- Semantic web interoperability
  - Ontology import
  - RDF export (WebAnnotation + extensions)
- Integration of a concept-detection server from HPI

CONCLUSION

- Advene - a useful tool for AV Digital Humanities project
  - Able to export/import from multiple other models/formats
  - Flexible and extensible
  - Supports the whole scholar workflow from exploration to publication
- Available support for custom developments and training - contact me
- Many ideas, looking for funding

THANKS FOR YOU ATTENTION

Any question?

@Olivier_Aubert
www.olivieraubert.net
www.advene.org

APPENDIX: ACTIVE READING

Inscription of marks

Audiovisual document

Publishing

Browsing

(Re-)organization

HV Document