

USING ADVENE TO ACCOMPANY RESEARCH IN AUDIOVISUAL DIGITAL HUMANITIES



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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

Advene - tbl_linked_data.asp - Tim Berners-Lee at TED: The next Web of open, linked data

File Edit View Player Packages Help

No active dynamic view

Transcript x Editing A gr... x Note taking x Tree view x HTML Viewer x

http://localhost:1234/packages/tbl_linked_data/view/transcript

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Origin of the Web: frustration

Time flies, It's actually almost twenty years ago when I wanted to reframe the way we use information, the way we work together, I (??) it the World Wide Web. Now, twenty years on, TED, I want to ask your help in a new reframement. So going back to 1989, I wrote a memo suggesting global hypertext system. Nobody really did anything with it very much. But eighteen months later - this is, you know, this is how innovation happens, eighteen months later my boss said I could do it on a side, as a sort of a play(?) project, ehr, (??) on the computer we'd got. And so he gave me the time to code it up. So, I basically roughed out what HTML looks like, the hypertext protocol, HTTP, the idea if URLs, these names for things which sorted(?) HTTP. I wrote the code, and put it out there. Why did I do it? Well, it was basically frustration. I was frustrated with- I was in this- I was working as a software engineer in this huge very exciting lab. Lots of people coming from all over the world. They (??) all sorts of different communities(?) with them, they had all sort of different data formats, all sorts of kinds of documentation systems. So that, in all that diversity, if I wanted to figure out how to build something out of one little bit of this and a bit of this, everything I looked into, I had to connect to some new machine, I had to learn to run some

systems. So that, in all that diversity, if I wanted to figure out how to build something out of one little bit of this and a bit of this, everything I looked into, I had to connect to some new machine, I had to learn to run some new program. I had to- I would find the data may be, the information I wanted, in some new data format and they were all com- incompatible. It was just very frustrating, the frustration was on this- all this unlocked potential. In fact on all these disks, there were documents. So, if you just imagine they all being part of some big virtual documentation system in the sky, then- say, on the internet, then life would be so much easier. Well, once you have an idea like that, it kinds of gets under your skin, and even if people don't read your memo (actually he did, it was found after he died, his copy, it was found and he'd written "vague but exciting" in pencil

00:02:32.671

Pause

Timeline x

Scale

Discrete scrolling

Inspector

Annotation a1231 (d: 00:01:27.641)

00:02:29.203 - 00:03:56.844

Screenshot

Contents

A grassroots movement

Text annotation

Transcript

Links

Parts

Summary

Shots

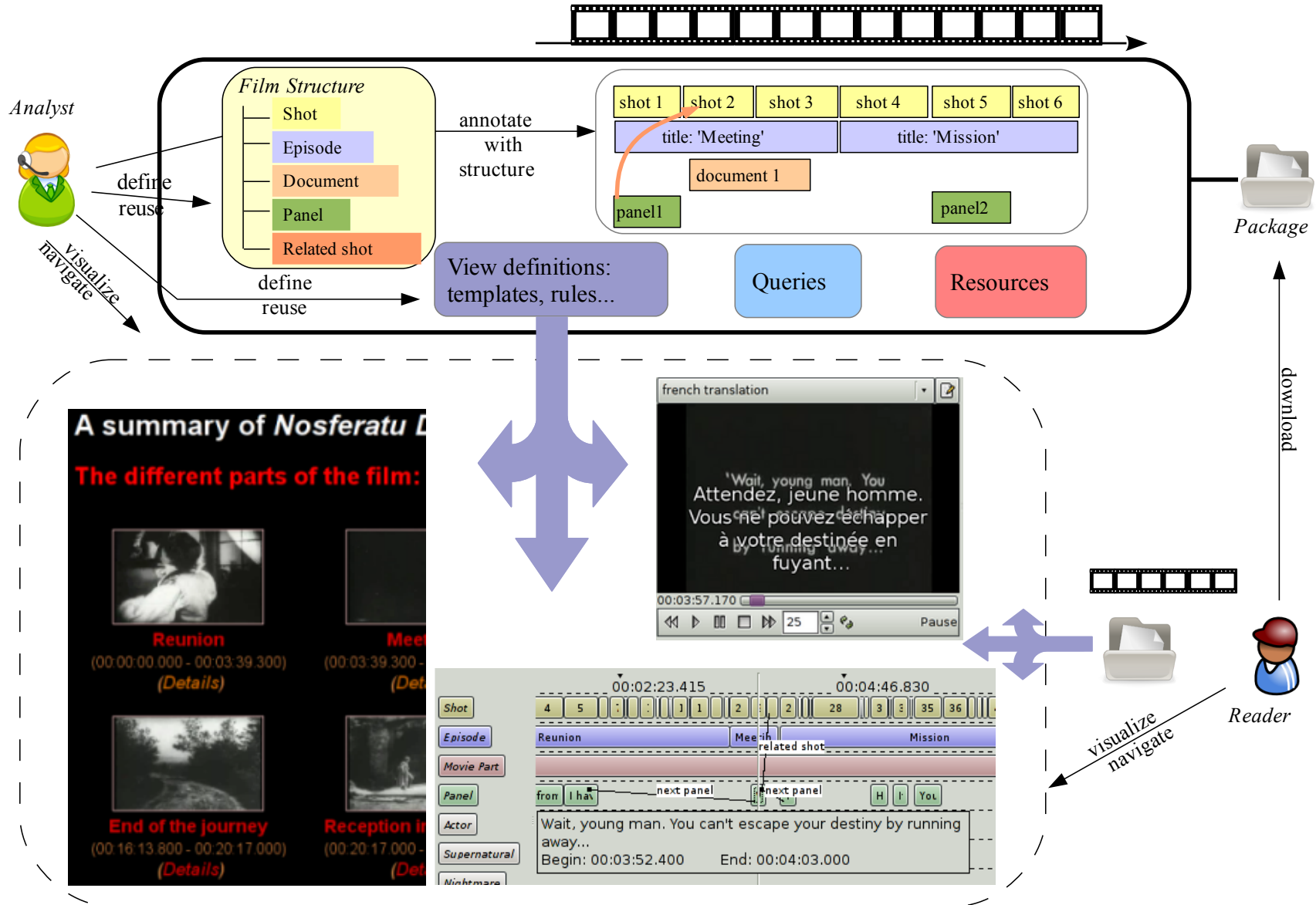
Subtitles from TimBerners-Lee_2009.1.srt

A grassroots movement (a1231)

00:02:29.203 - 00:03:56.844

http://localhost:1234/media/play/47822/59507

PRINCIPLE



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

The screenshot displays the REMIND METHOD interface, which is used for creating and publishing hypervideos. The interface is divided into several sections:

- Top Section:** A video player showing a scene with birds in a cage. The title bar reads "Advene - MZS_yuki.azp - Cours d'expérience, Yuki, Musée zoologique, Strasbourg, avril 2011".
- Left Section:** A timeline view showing a sequence of events. The timeline is labeled "Timeline" and includes a "Scale" bar. Below the timeline, there is a list of annotations categorized by type (e.g., Verbalisations, Représentamen R, Engagement E, Anticipation A, Référentiel S, Unité de cours d'expérim). The annotations are color-coded and include text such as "V: I know it yC: V: mh I think it's a", "La gai", "Les oiseaux et es", "Éviter", "Essaye", "Essayer de trouv", "Attent", "Aligentes liées à d", "Ce mus", "Signe hexadique n°3", and "Essayer de comprendre les intentions du mus".
- Right Section:** A text area containing a transcript of the video. The transcript is labeled "Synchronized transcription" and includes the following text:

V: mh I think it's a little bit bored it's not + it's just really a kind of collection for me + it's like there are collections + we have this kind of collections of birds this: huge amount + it's really huge amount <C: mh> but we didn't really show out like + were they live <C: mh> and where like + where they come from + what kind of environment do they live <C: mh> and also for this kind of the-the little notes not really clear because like + at least when you write where do get this bird this-this exact one in french what's the species name in latin and maybe in english or in germany I don't know but guess in french it's not really that good for-to people who doesn't really doesn't know anything about birds so I guess to understand what they are <C: mh> they are just collections like-for a professor animal behaviour or animal or zoo knowledge + they will understand but for no more people it's a little bit bored C: so you just pass V: I just pass yea I couldn't even-I couldn't remember all the birds I can't C: so sometime you look at the birds
- Bottom Section:** A list of annotations categorized by type (e.g., Verbalisations, Représentamen R, Engagement E, Anticipation A, Référentiel S, Unité de cours d'expérim). The annotations are color-coded and include text such as "V: I know it yC: V: mh I think it's a", "La gai", "Les oiseaux et es", "Éviter", "Essaye", "Essayer de trouv", "Attent", "Aligentes liées à d", "Ce mus", "Signe hexadique n°3", and "Essayer de comprendre les intentions du mus".

Annotations are labeled with "Annotation types" and "Annotations + relations". The timeline is labeled "Timeline". The text area is labeled "Synchronized transcription". The bottom section is labeled "Published hypervideo".

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: Cinepoetics (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

Advene - CompanyMen_v1.0-split-018-RZ_R2.azp - The Company Men (2010) - John Wells (*)

File Edit View Player Packages Help

History ▶ No active dynamic view

00:00:00.000
00:34:23.660

00:34:46.599

1.0

Playing

Checker x

List of possible issues in the current package

Overlapping	Completions	Ontology URI	Duration	EmptyCo
For every annotation type that has predefined keywords, this table displays the anno that contain unspecified keywords.				
Snapshot	Content	Undef. keywords	Type	
	low,higher	higher	Cam Camera Angle Vertical Posit	
	Medium	Medium	Cam Camera Movement Speed	
	floatin	floatin	Cam Camera Movement Type	

Timeline x

1mark=0m8.68s

00:34:07.300 00:34:15.975 00:34:24.650 00:34:33.325 00:34:42.000 00:34:50.675 00:34:59.350

Inspector

Annotation f736ab36-71
00:34:45.260 - 00:34:55.140
▼ Screenshot

Contents
medium shot,[TO],mediu

00:34:45.260 - 00:34:55.140

As | Soundwave

Montg | Shot

Montg | Shot Duration

ImCo | Field Size

Lg | Dialogue Text

Lg | Text Diegetic

513 514 515 516

00:00:14.440 00:00:21.600 00:00:09.880 00:00:12.560

medium shot long shot,[TO],medium long shot medium shot,[TO],mediu medium closeup

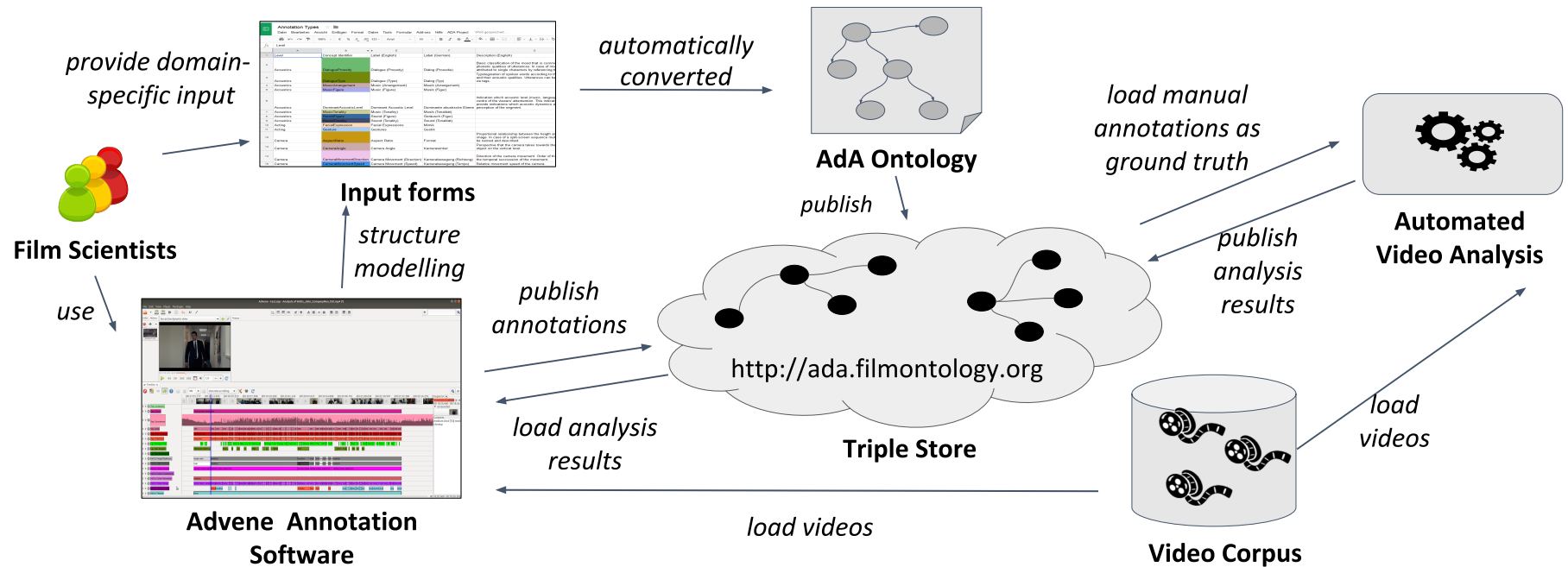
H The c He's just tryin Lipton Well, our Paul, ydA No, this is just for the five of u Thi Now, Wh It's Floor to c

STOP Turner

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



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?

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www.advene.org

APPENDIX: ACTIVE READING

