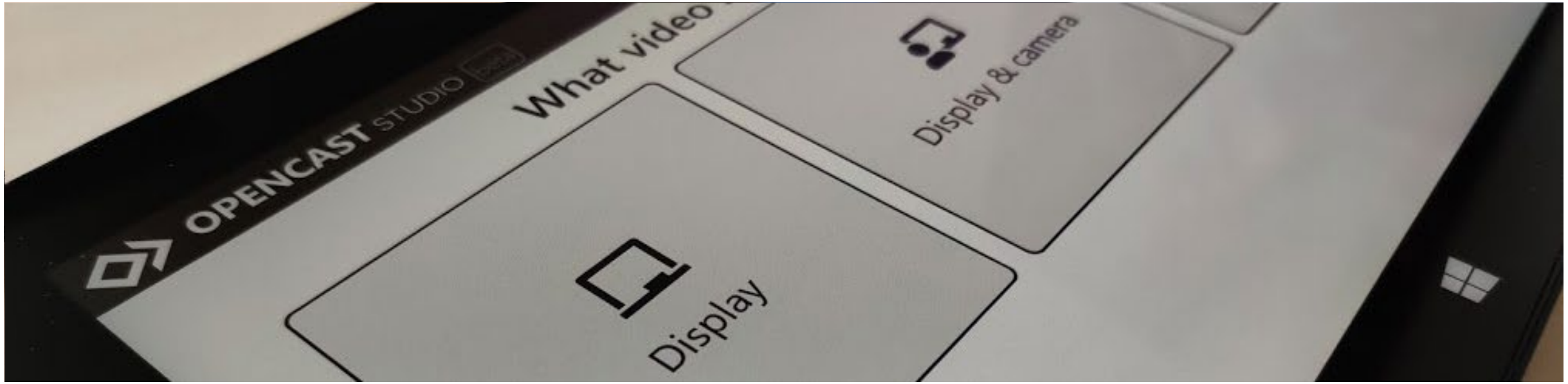


DIY video production with Opencast Studio

Web-/browser-based dual-stream screencast recorder for the Opencast video management system

PARIS
04.Feb.2020
#esupdays29
#apereoparis20

OPENCAST

Opencast in a nutshell

Opencast is...

- a lecture capture software
- a video management system for academic institutions
- open source
- developed by a community of academic institutions
- driven by academic requirements

Comparison POD vs Opencast

	POD		Opencast
			Supported capture devices
Capture	Support upload by ftp or rest from capture device, use plugin to import different kind of type	Capture	**Schedule capture devices**
Capture	Upload	Capture	Upload, Opencast Studio
Capture	Video management like a **youtube for university**	Capture	Video management for admins
Capture	Video completion (add contributors, subtitle, additional ressources and overlay)	Capture	Manage Metadata, Upload Captions, **Edit Video**
Process	Encoding in HLS and MP4	Process	Encoding
Process	Enrichment synchronise with RichText, image, website, PDF etc.	Process	• multiple simultanous video tracks for screen-recording, presenter, document-camera, etc. • Automated slide detection in screen recording. • OCR in screen-recording

Comparison POD vs Opencast

POD		Opencast
Transcription with deepspeech in production	Process	Transcription: Watson, Google, Amberscript, Nibity. *DeepSpeech integration under development*
Captions/subtitle in VTT		Captions/subtitle
Integration LMS use embed or moodle plugin		LMS integration: LTI; native plugins for Moodle, Ilias, Stud.IP
Live with RichText (feed twitter, chat)		Scheduled live streaming (video)
Portail individuel	Distribute	**Player(s)**, media module, Annotation Tool

Comparison POD vs Opencast: technology stack

POD	Opencast
Modular – Saas in development	Modular (Micro Services); cloud ready; multi-tenancy
Front-end / Back-end	Admin UI (Backend), Multiple Frontends
Scalable (Admin UI/Encoding/Live/Search/Database)	Scalable (Admin UI/Encoding/Live/Search/Database)
VideoJs player / file management	Two Players / Media Module
Bootstrap 4, VideoJS 6, JQuery	Angular 1, React, Backbone, Jquery, Bootstrap
Python 3, Django	Java, Javascript
FFmpeg	FFmpeg
Elasticsearch	Elasticsearch
REST-API, Dublin Core, LTI	REST-API, OAI-PMH, Dublin Core, LTI
Multilingual	>15 language (incl. French)
Accessible	Accessible (player)
Open source	Open Source (ECL 2.0)

Opencast capture agents (CA): Commercial Systems

Teltek

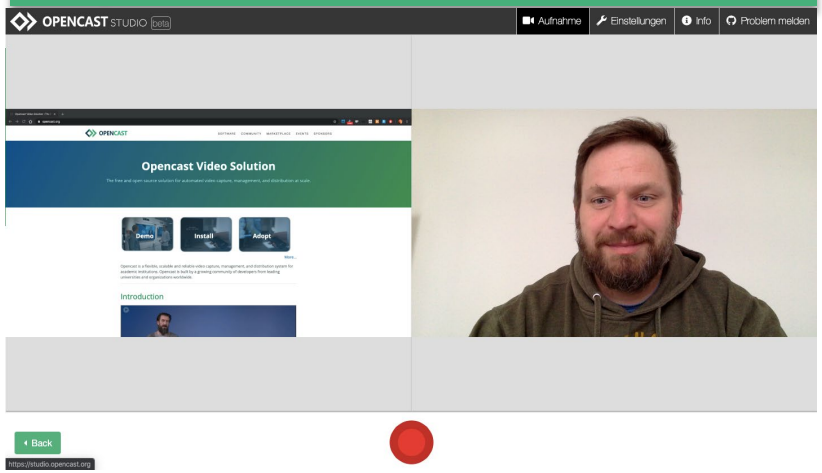
NCast

Extron

AREC

Capture: Open source options

Opencast Studio



ELAN e. V., ETH Zürich

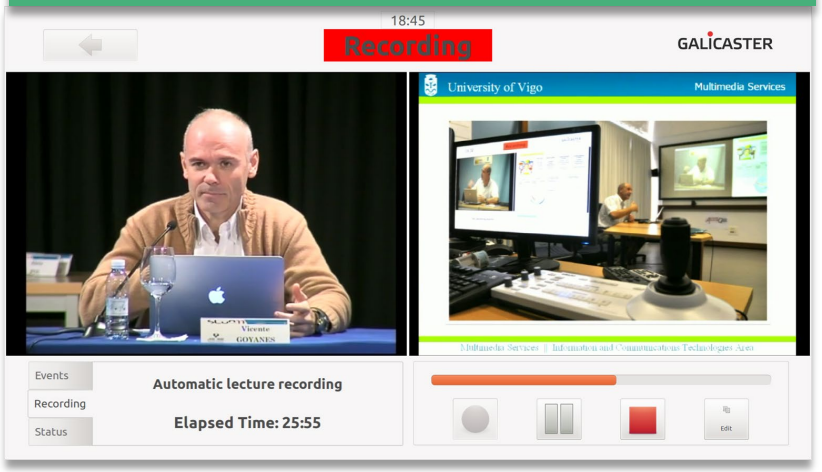
MIT License

pyCA

Lars Kiesow

LGPL-3.0

Galicaster



Teltek

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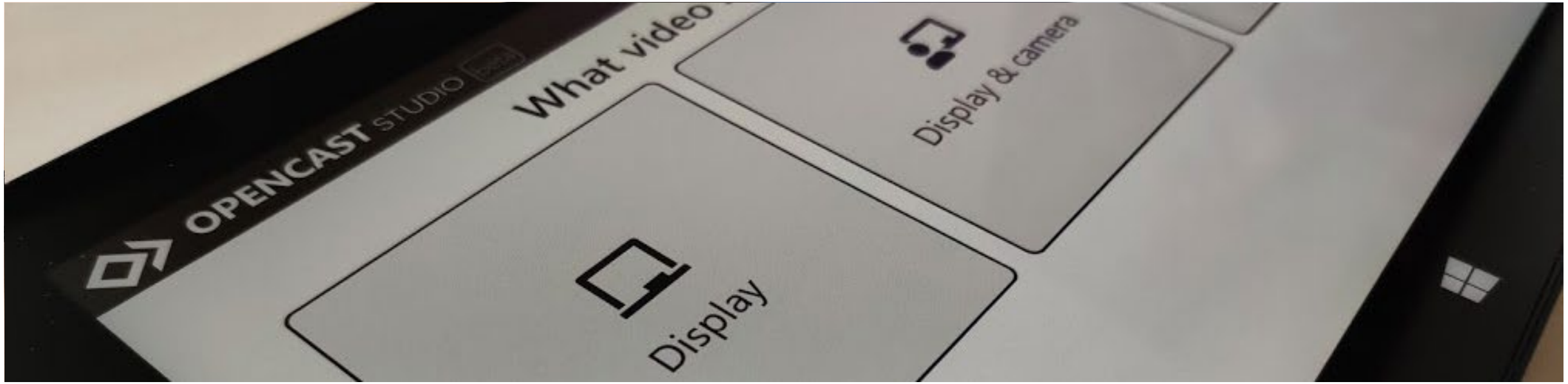


DIY video production with Opencast Studio

Web-/browser-based dual-stream screencast recorder for the Opencast video management system

OPENCAST

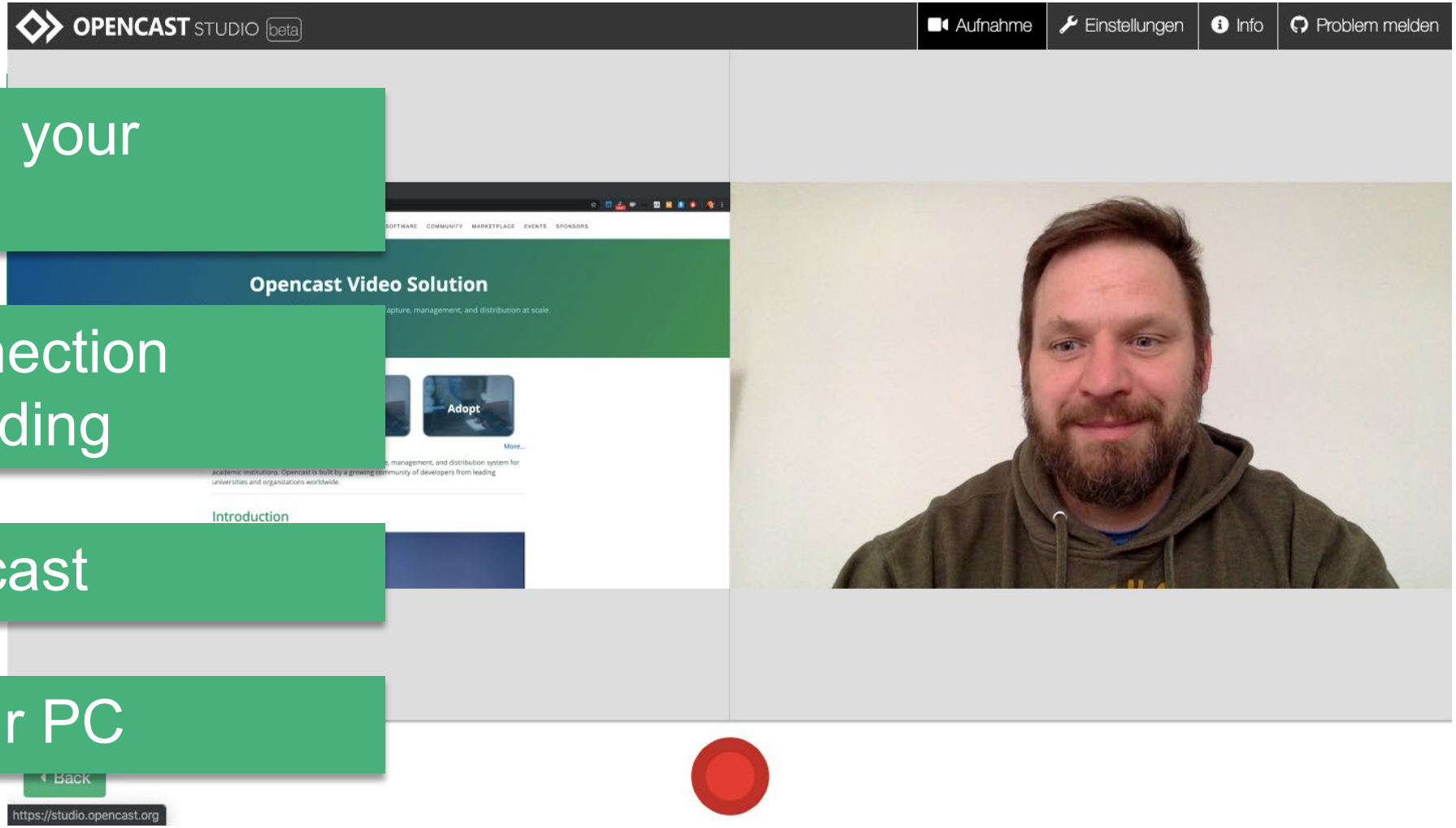
Live Demo

https://studio.opencast.org
https://develop.opencast.org
https://lernfunk.de

the following slides are only a backup, if the live demo does not work

Record with Opencast Studio

- Record videos in your browser
- No network connection needed for recording
- Upload to Opencast
- Download to your PC

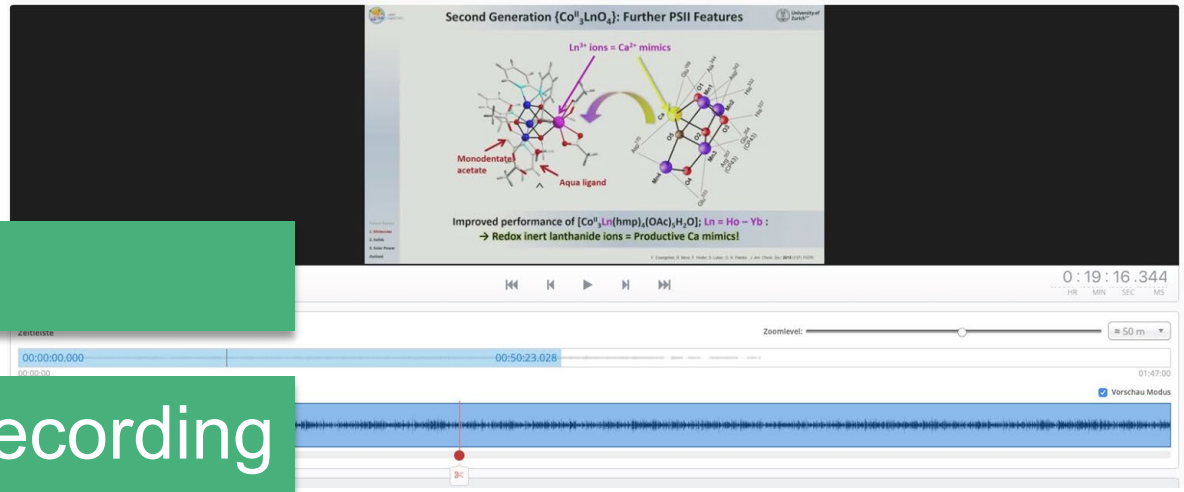


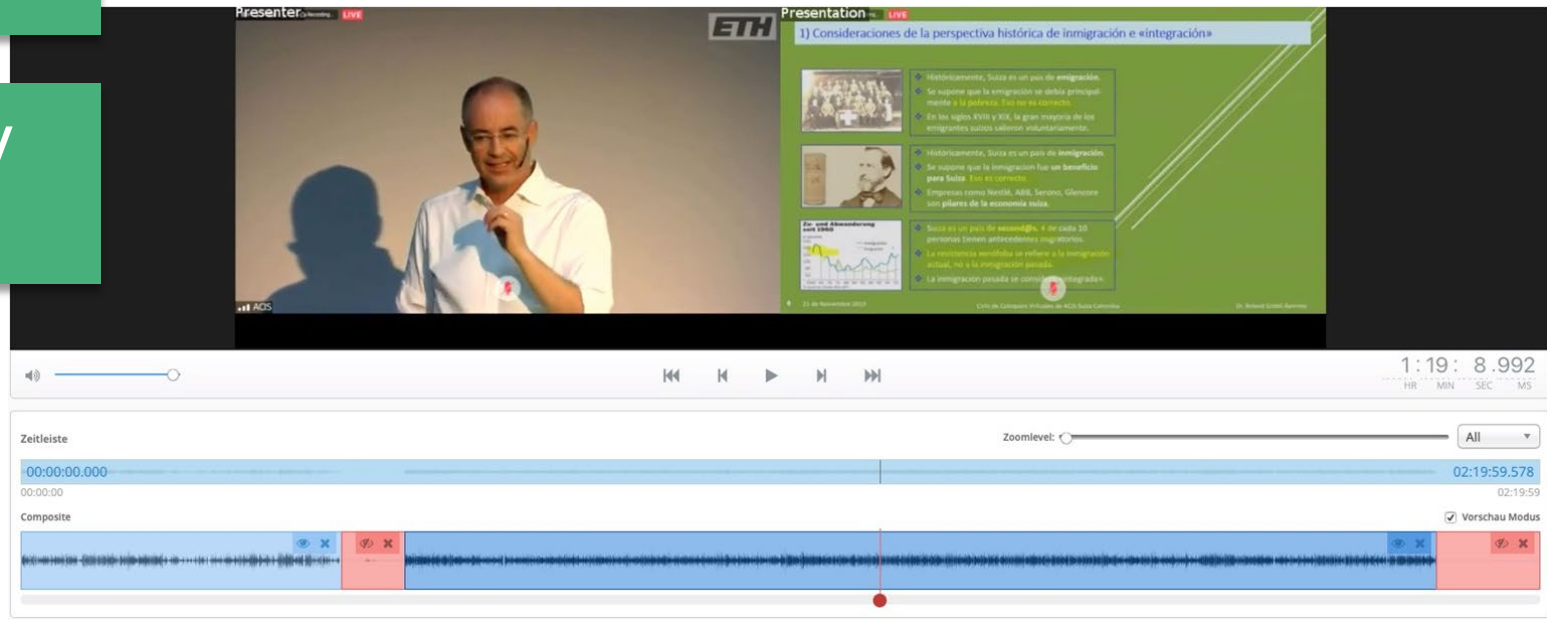
Video editor

Trim video(s)

Remove parts of the recording

Remove Parts Automatically with Silence Detection

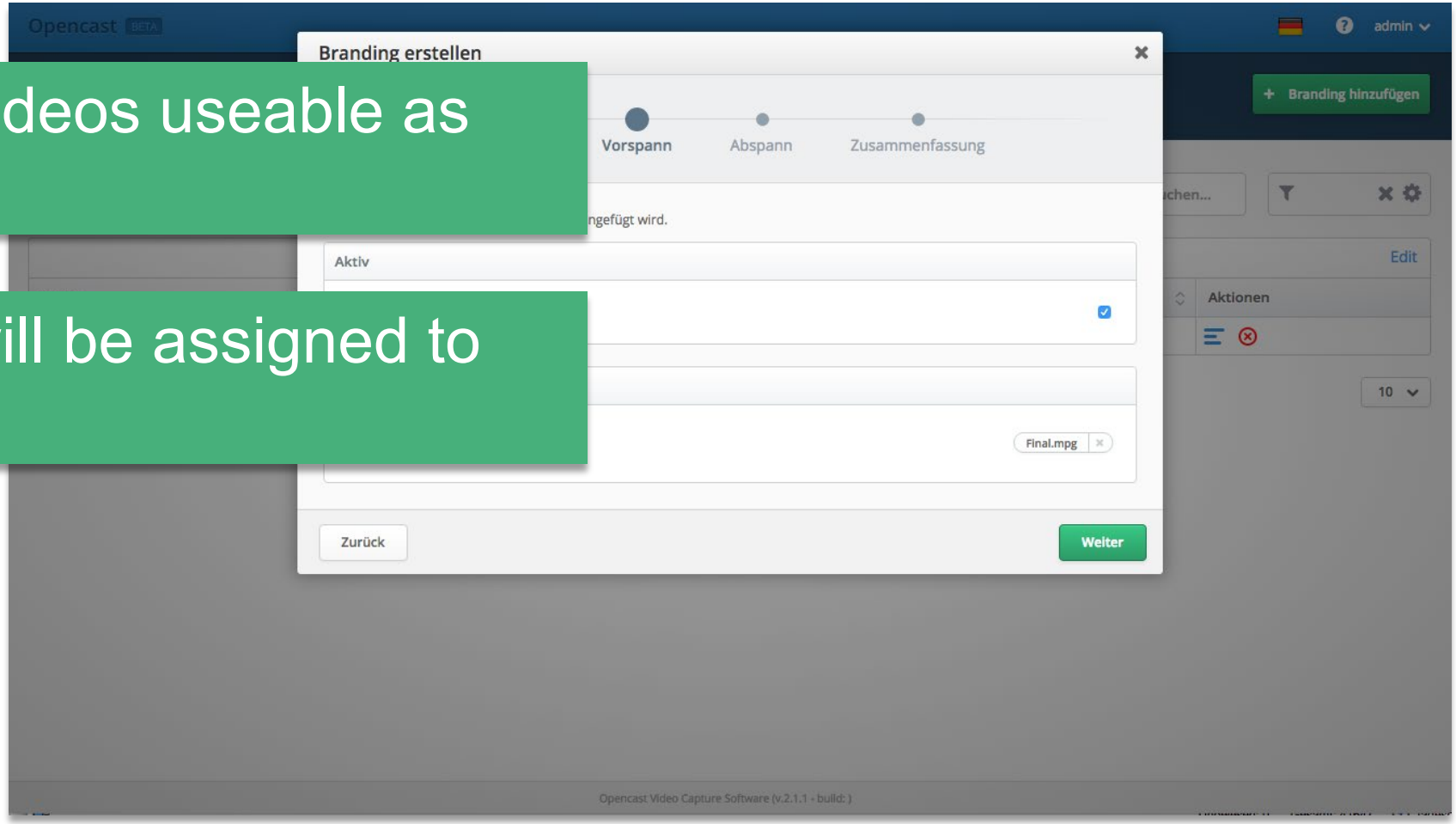




Processing: Themes

Custom Videos useable as Trailer

Themes will be assigned to Series‘

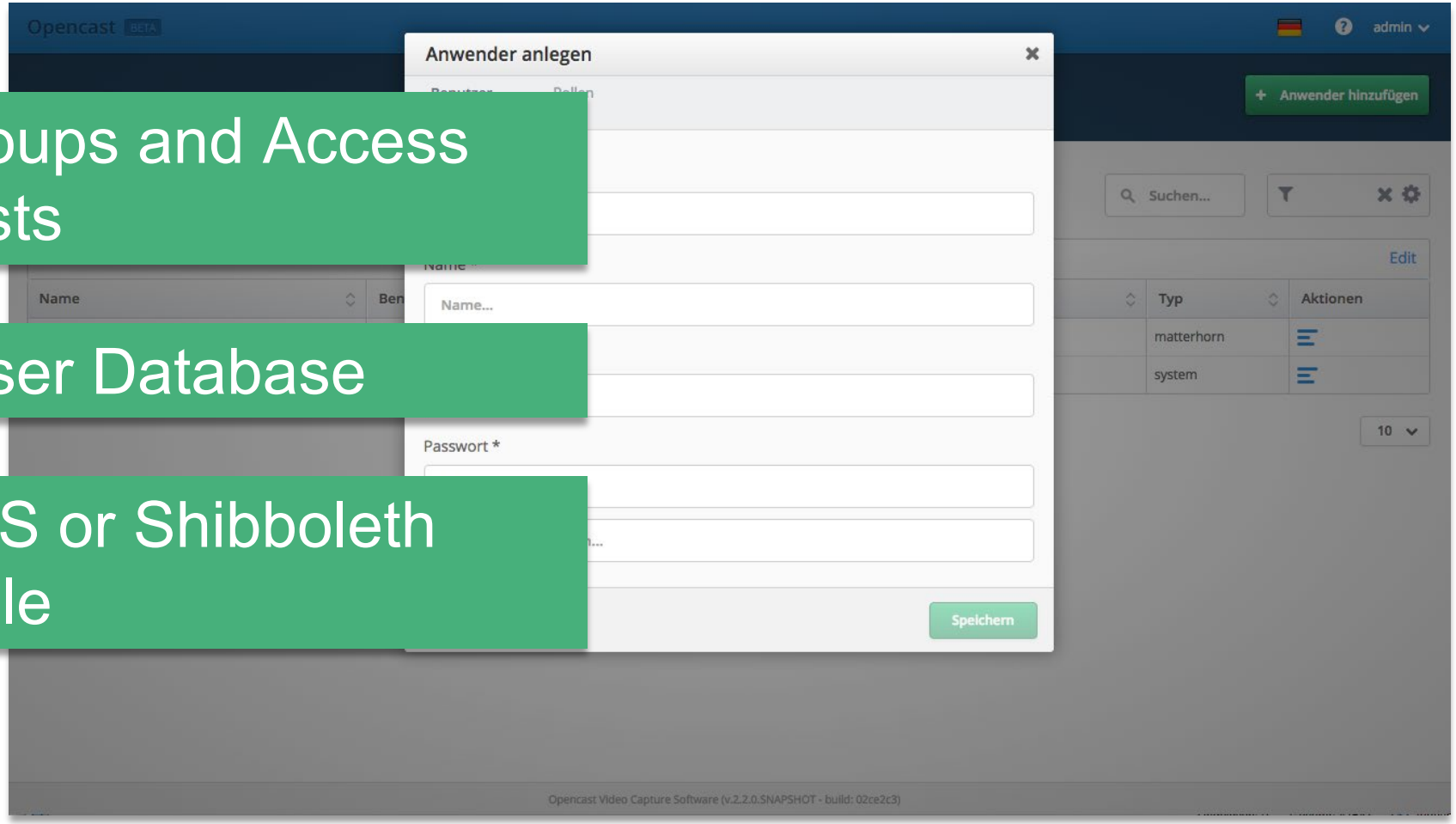


Users and Groups

Users, Groups and Access Control Lists

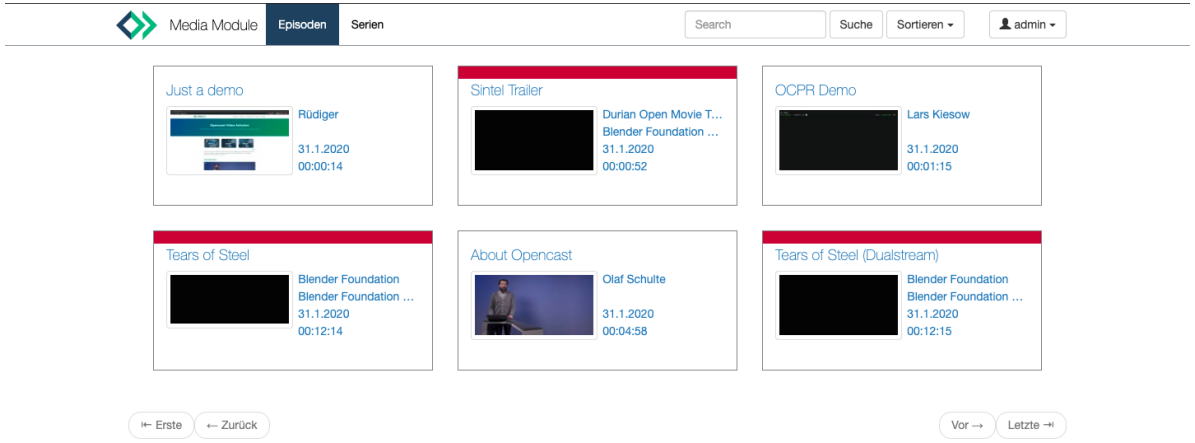
Internal User Database

LDAP, CAS or Shibboleth connectable

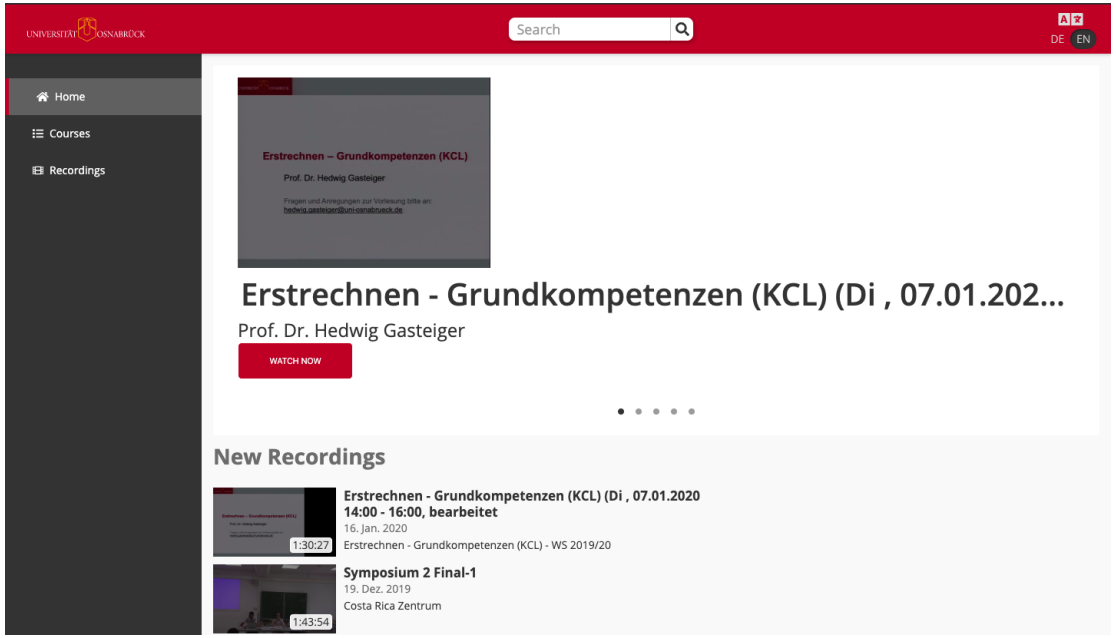


Distribution

Media Module

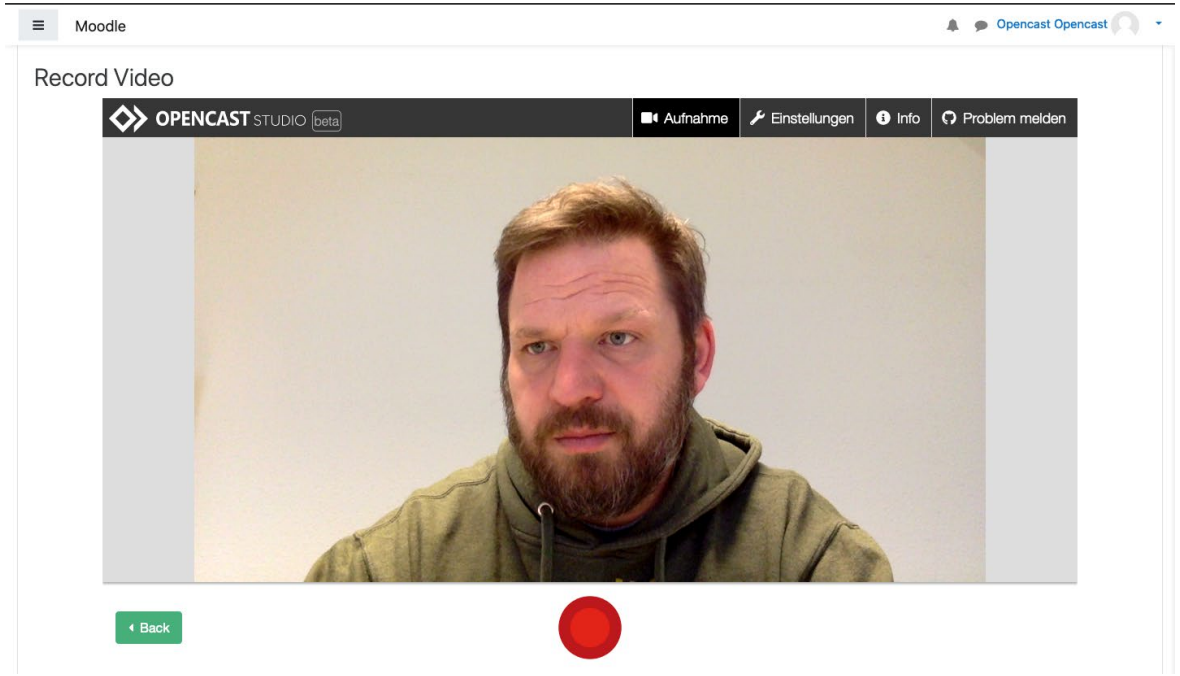


Video Gallery

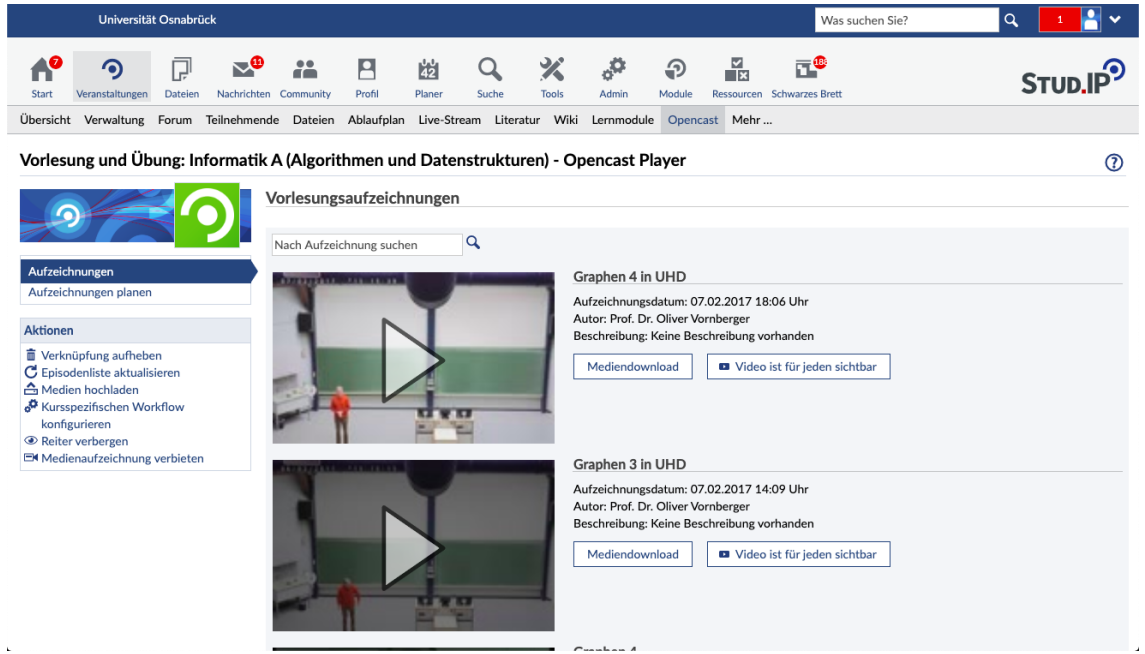


Distribution: Learning Management Systems

Moodle

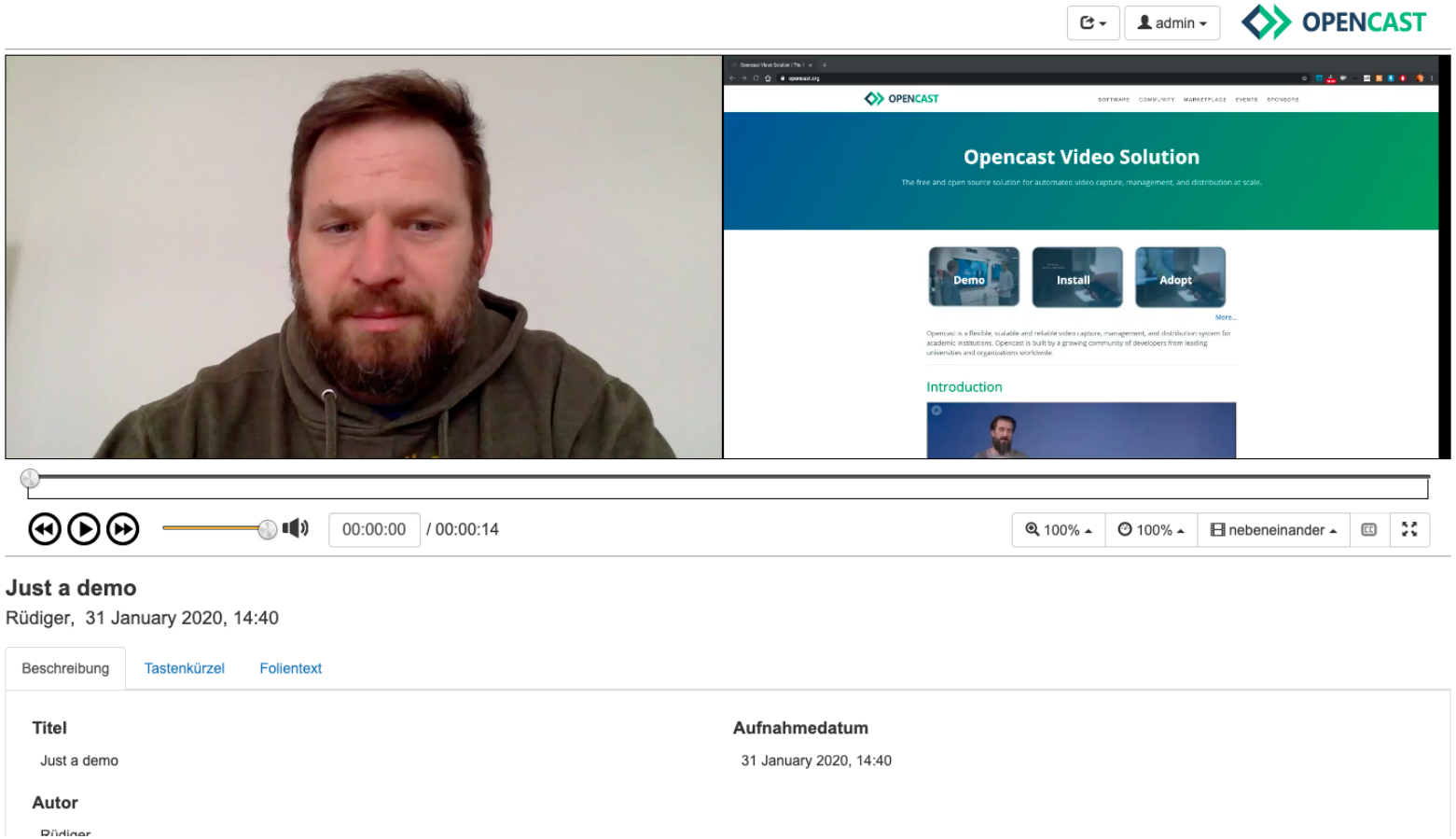


Stud.IP

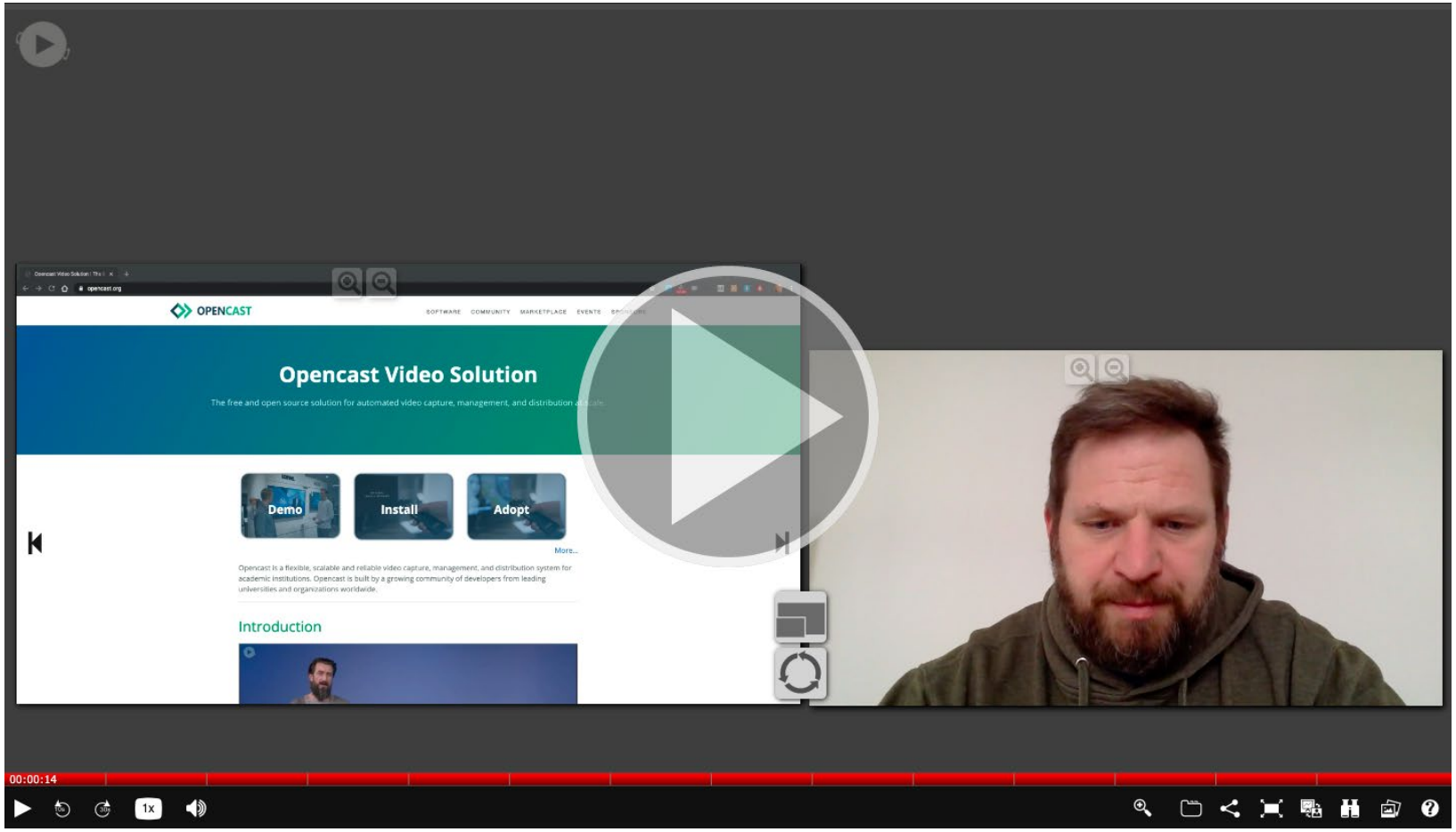


- **Ilias**
- **LTI** for generic integration

Distribution: Theodul Player



Distribution: Paella Player



End of Live Demo

Questions

Distribution: Player comparison

Feature	Paella	Theodul
Video Zoom with 4K support	✓	✓
Variable Playback Speed	✓	✓
Playback 2+ synchronized videos	✓	✓
Playback 2+ synch. videos on mobile devices	✓	
Captions	✓	✓
Navigation by segments	✓	✓
Live streaming support	✓	

Video players for Opencast

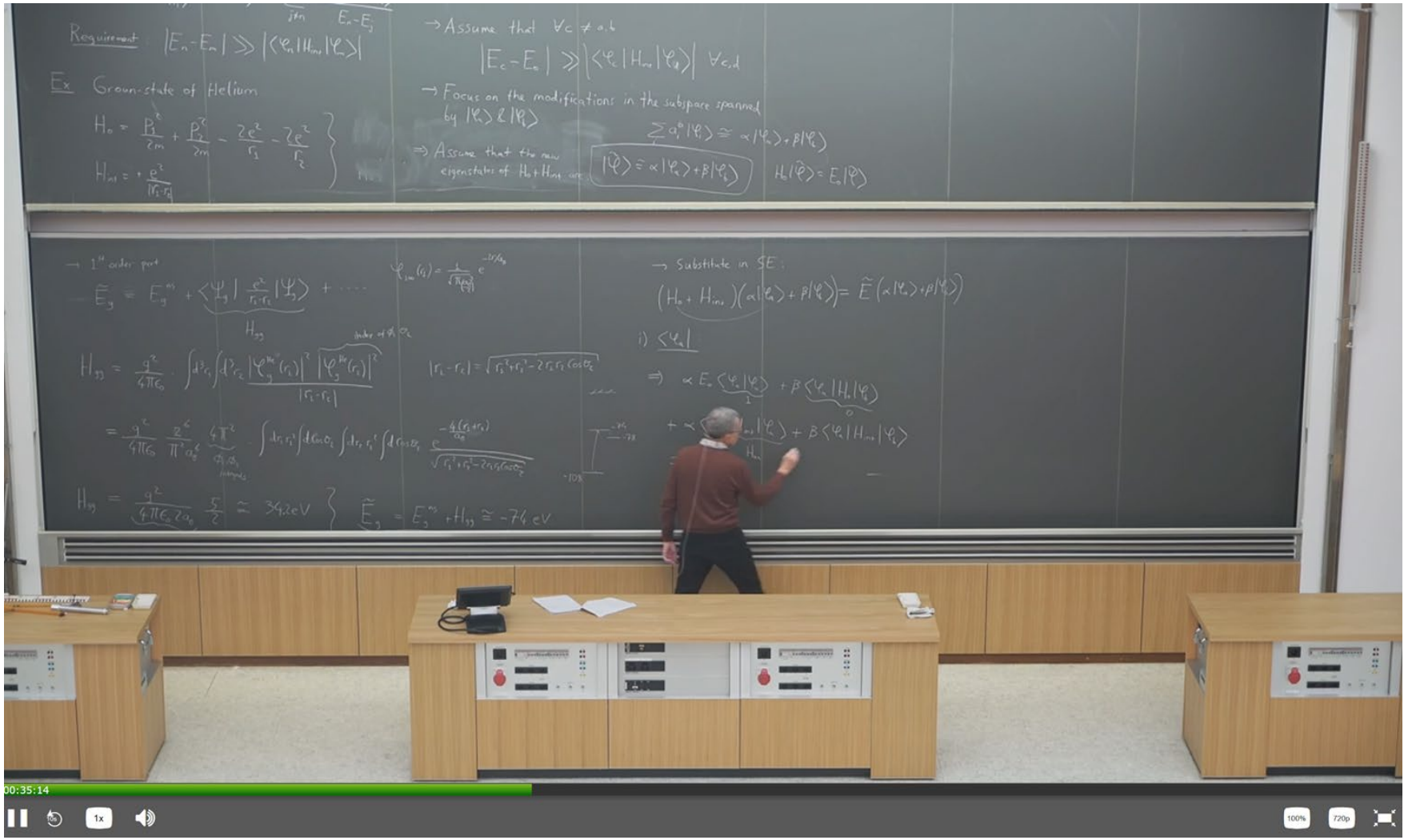
Paella player (Opencast default)

- HTML5
- HLS, DASH
- iOS, Android
- 4K / zoom
- Multiple sources
- Transcripts/captions
- Customizable

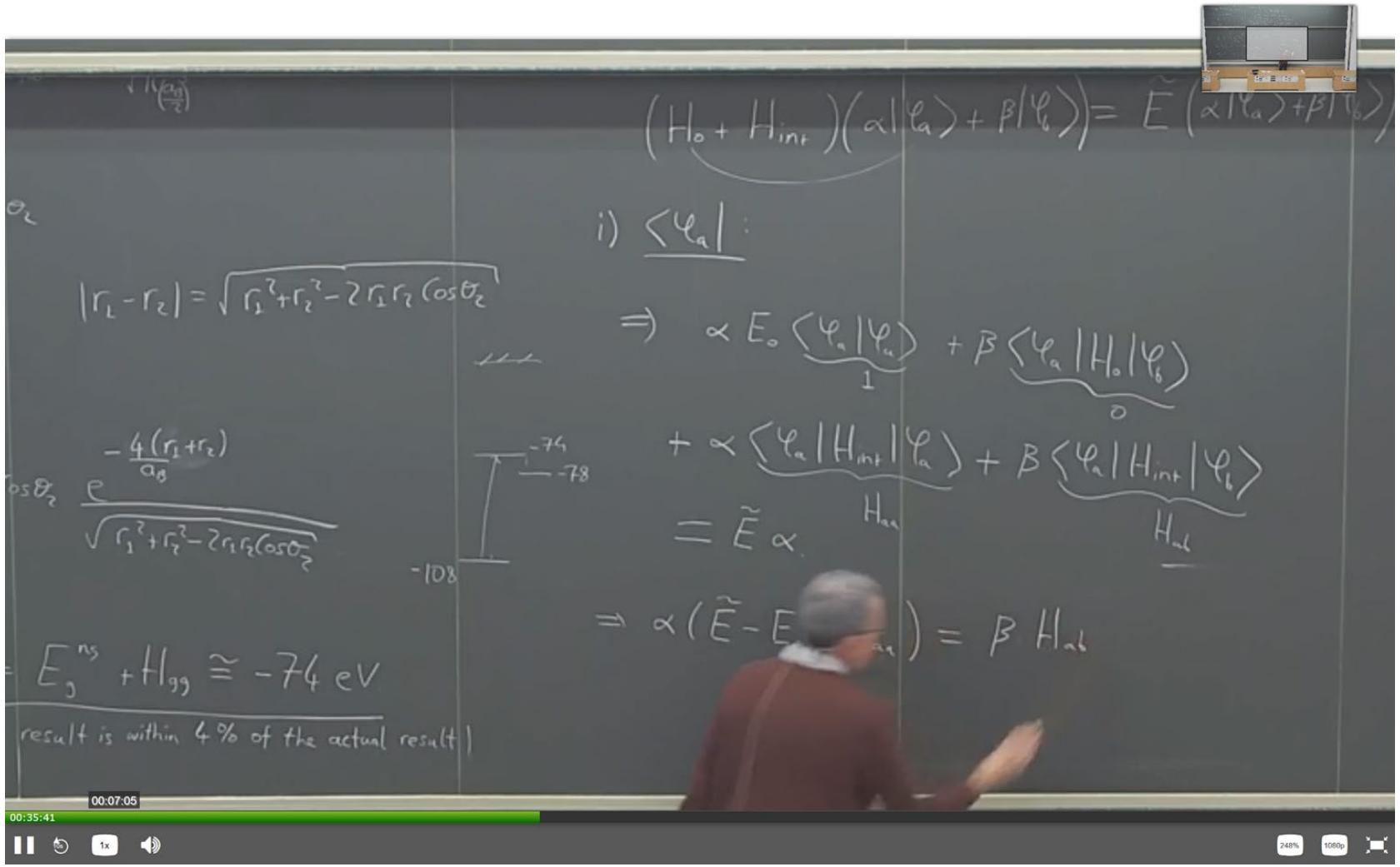
Any other player

- HTML5
- HLS, DASH
- iOS, Android

4K Video: Blackboard recordings with user-end zoom

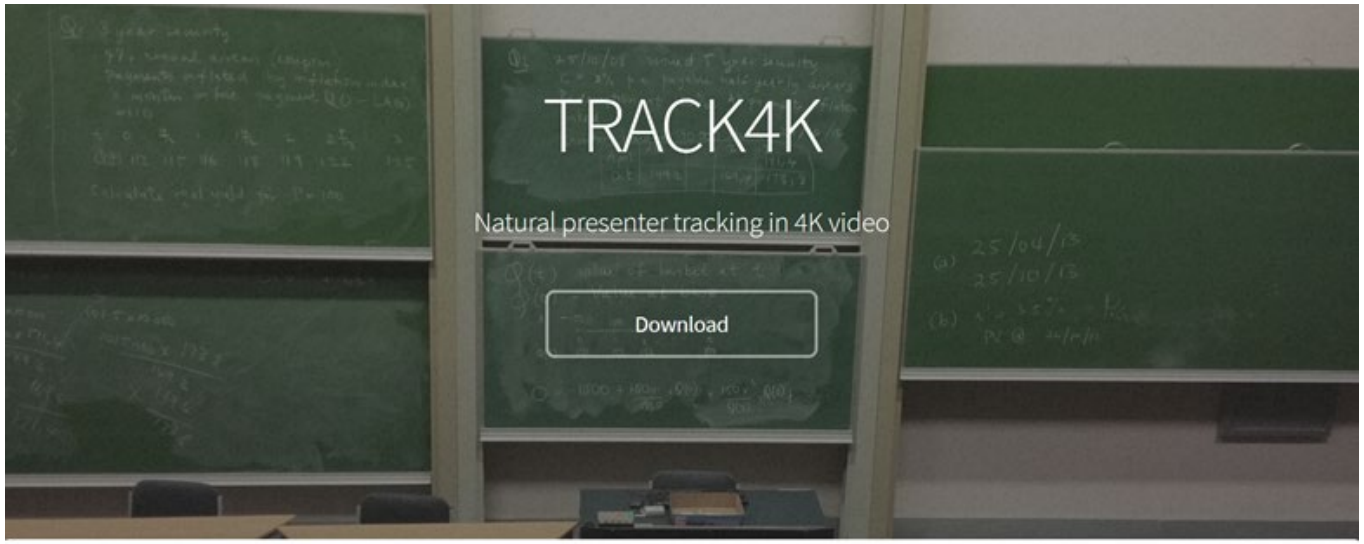


4K Video: Blackboard recordings with user-end zoom



Automated Video Tracking

- Track4K is an OpenSource project to find a teacher in a video window
- Opencast uses Track4K and 4K video to focus zoom on the teacher
- Students can enable or disable this function



An open-source, automated, lecture recording system that tracks the presenter in 4K video streams

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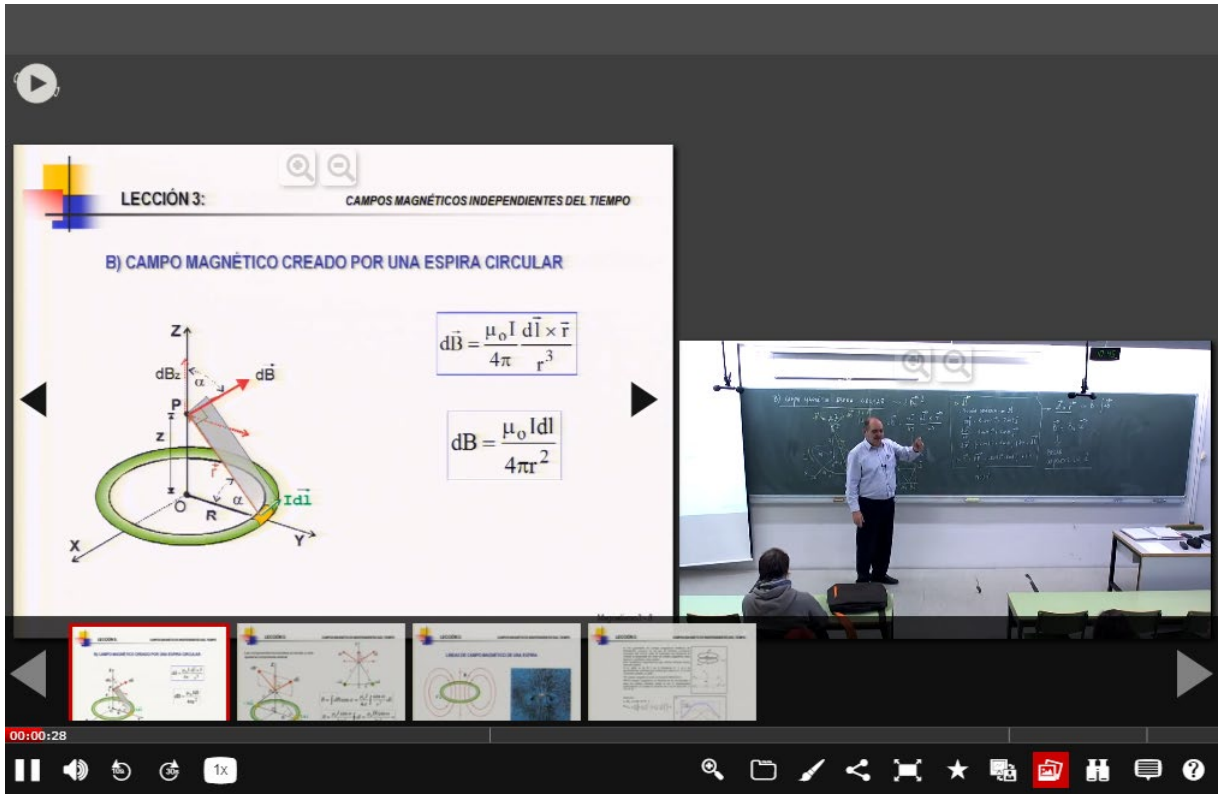
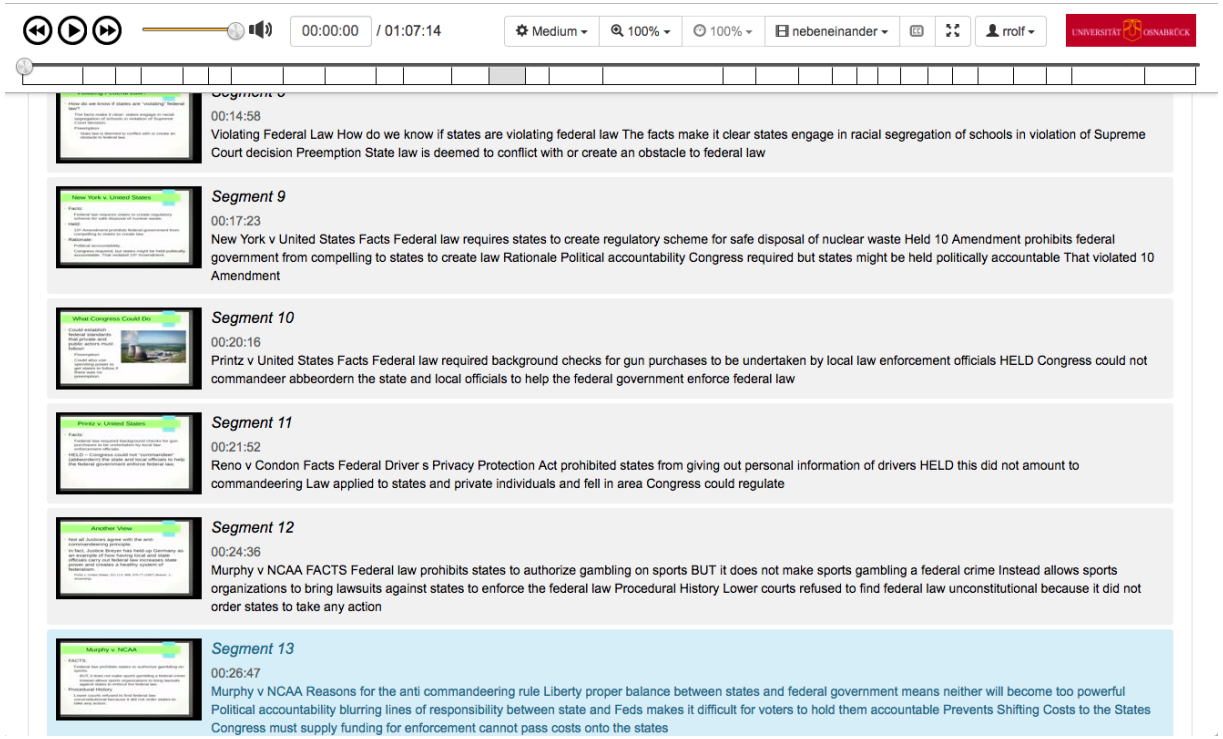
Automated Slide index



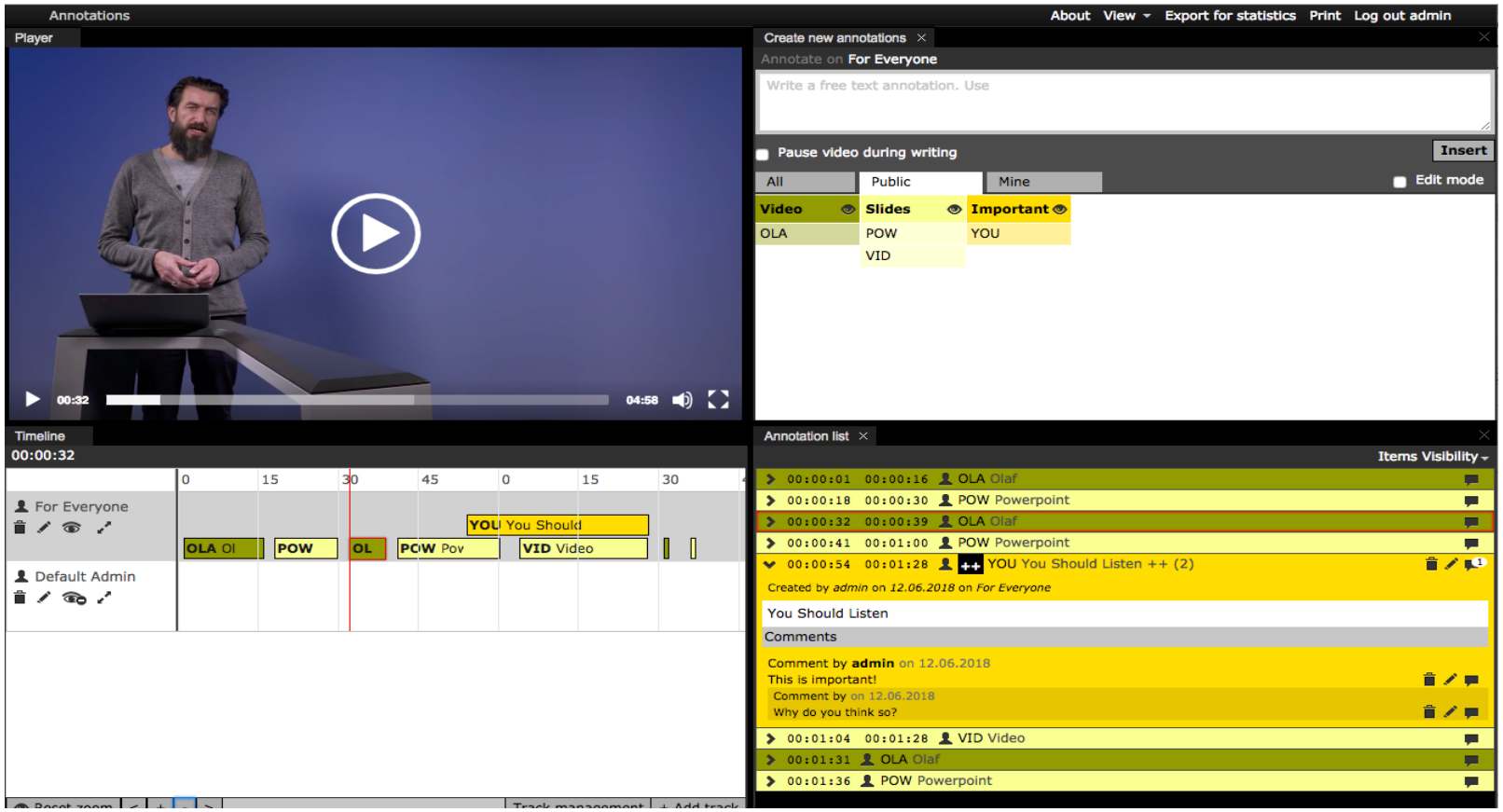


Automated translation / transcription

- Multiple language support
- Multiple audio tracks
- Multiple captions
- Search endpoints

Opencast Annotation Tool

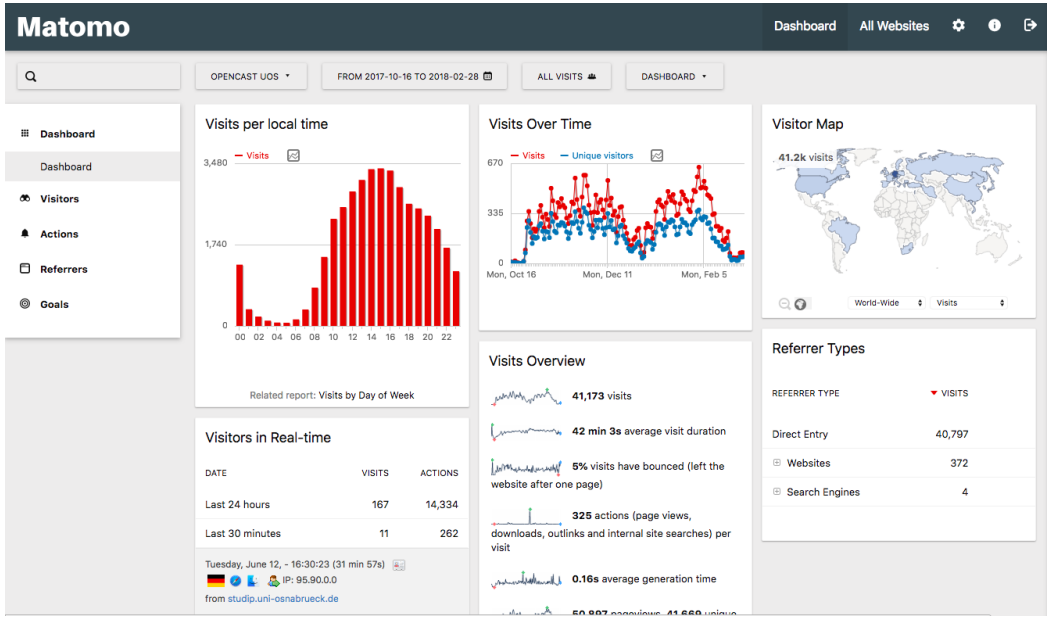
A tool for scientific coding/analysis of videos



Learning Analytics - Matomo

External Open-Source Tool for Website Analytics

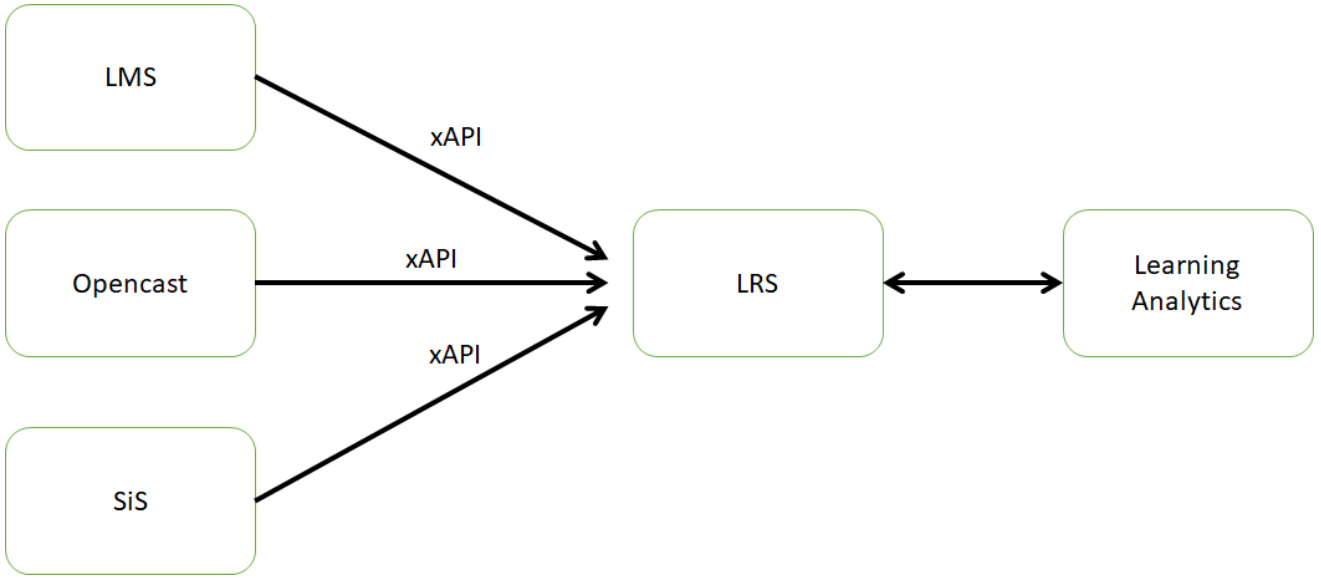
- Gather Usage Data
  - Anonymous data collection if needed
  - Checklist available for GDPR compliance
- Create Reports
  - Viewers per Series
  - Average Viewing Time
- Additional (commercial) plugins allow an improved video usage analysis.



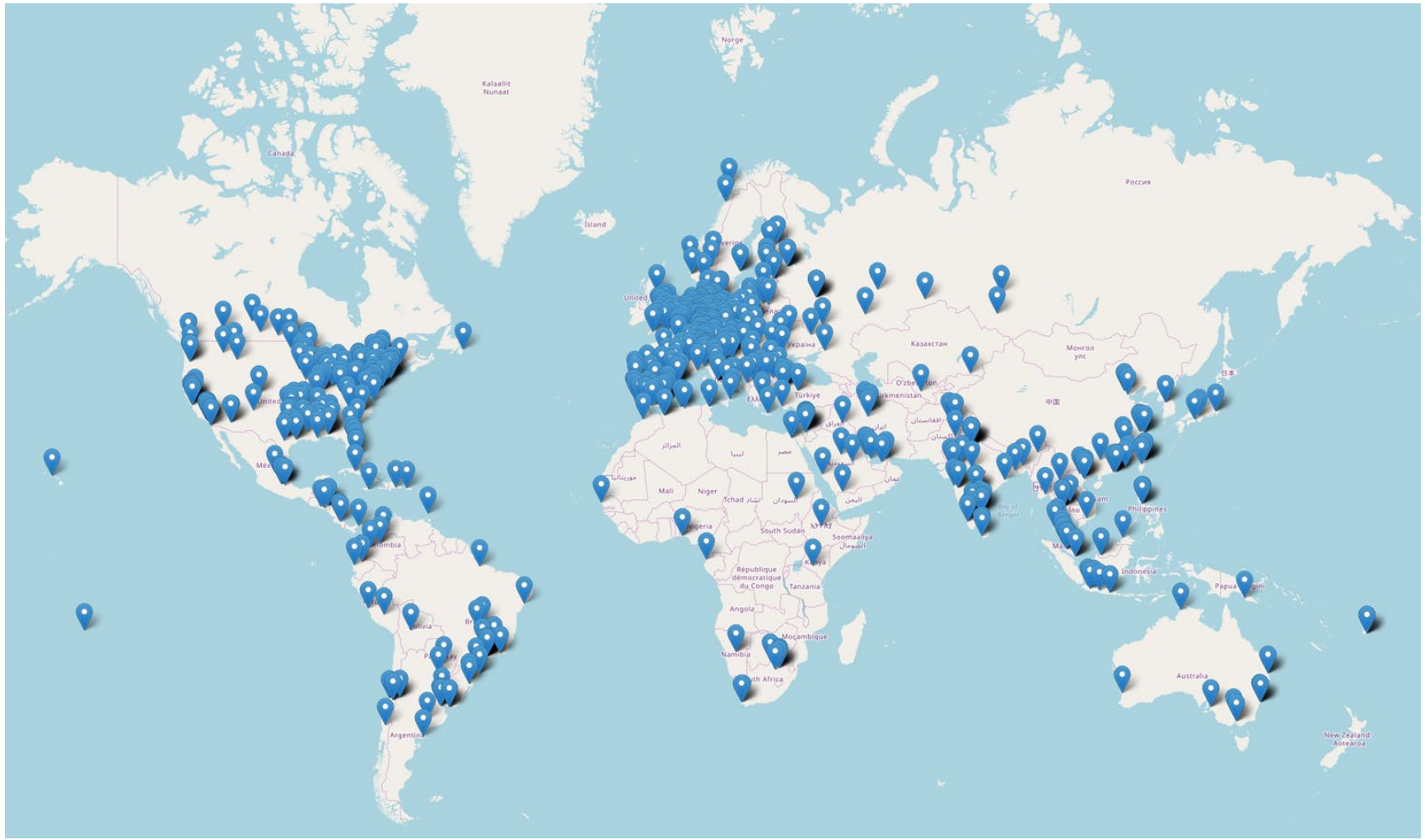
Learning Analytics - XAPI

Leverage Institution-wide Learning Analytics

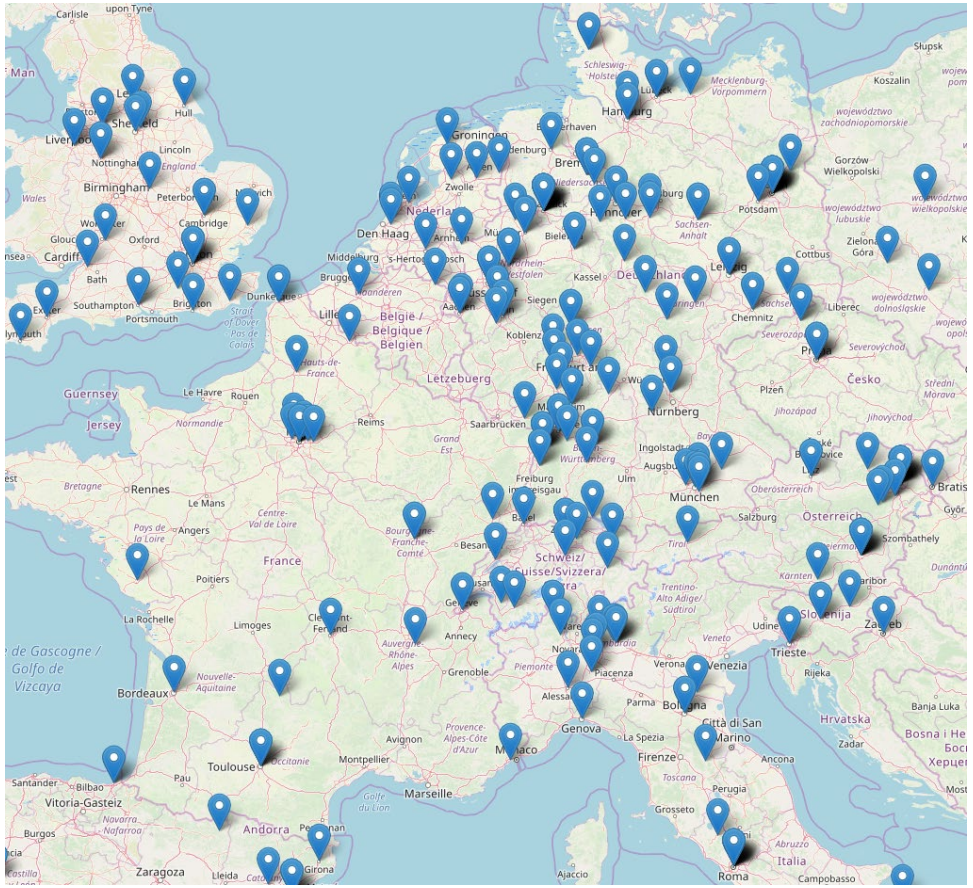
- Correlate data between systems
  - Requires xAPI support in all systems
  - Standard protocol
- Create Advanced Reports
  - BIg data analysis
  - Predictive analytics



The OC community according to https://map.opencast.org/



The European OC community



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