

#05 VIDEO RECORDING AND SCREENCASTS

with the operating system Linux

This article describes the workflow for creating video recordings and screencasts, especially considering the tools that are available in the operating system Linux.

This article aims to provide teachers with a simple introduction to produce video recordings and screencasts and explains the steps involved.

In addition, an interactive learning video is available for this article (linked in the online version of this article).

Possible applications

From the wide range of applications of audiovisual media, some examples will be addressed here that are particularly relevant for teaching:

- discussion of slides, sketches, flowcharts
- instructions for using software, solving tasks
- recording of laboratory experiments

Preliminary considerations

Video recordings and screencasts are types of videos that are suitable for creating teaching and learning materials. For use in teaching, special attention must be paid to the didactic concept of the course and the use of this medium as a teaching tool.

The following points briefly summarise the preliminary considerations and related questions:

- **Decide on the use of the learning video**
What will I use this tool for?
- **Create a didactic concept for the content of the learning video**
What is the content and which learning objectives does it support?
- **Create a structure for the learning video that fits the didactic concept**
How do I convey the learning content?
- **Record the required video footage**
What do I want to teach or show?
- **Post-production and editing**
How should the material be presented?
- **Use and publication**
Where and how do I make the video available?



see also the learning video canvas



Various tools are available in Linux for recording and editing the raw video material.

Below, some applications, their use, basic features and availability are listed:

APPLICATION	MAIN FEATURES	OPERATING SYSTEM
-------------	---------------	------------------

Screencast

VokoscreenNG	Screen, webcam, audio, start/stop timer, screenshot	Linux, Windows
SimpleScreenRecorder	Screen, audio, start/stop timer, screenshot	Linux, BSD
Kazam	Screen, audio, start timer, screenshot	Linux

Video recording

Webcamoid	Video, photo, audio, video effects	Linux, Windows, MacOS
Cheese	Video, photo, photo series, video effects	Linux
OBS Studio	Video, photo, photo series, audio, video effects, audio effects	Linux, Windows, MacOS

Post-production

Kdenlive	Multi-track editor, video, audio, effects	Linux, Windows
OpenShot	Multi-track editor, video, audio, effects	Linux, Windows

Recording screencasts

Screencasts are video recordings of the screen content. The applications listed above also support a simultaneous audio recording. Screencasts can be used to create any content that can be displayed on the screen.

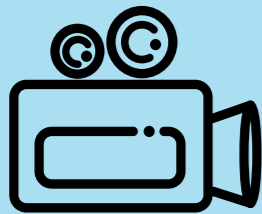


Examples:

Instructions for operating software, discussing lecture slides

Using the software is usually very simple. The workflow looks as follows:


- Select input devices (screen, sound card)
- Select image frame (whole screen, window or rectangle)



#05

VIDEO RECORDING AND SCREENCASTS

with the operating system Linux

Author	Jakob Harden
Date of Publication	10/2022
License	 This work is licensed under a Creative Commons Attribution 4.0 International: https://creativecommons.org/licenses/by/4.0/deed.en

- Select the image resolution (SVGA, HD) and audio channels (mono, stereo)
- Select the output format (MKS, MP4) for image and sound
- Start recording
- Record
- Stop recording



Other useful features include the ability to show or hide the cursor during recording, a screen magnifier and a timer, which starts and stops the recording automatically.

Video recording

Video recording differs from screencasting only in that a video camera (e.g. webcam) is selected as the input device instead of the screen, and the image frame cannot be freely selected.



Examples:

Recording a laboratory experiment or a lecture



Other integrated, useful features are, for example, mirroring the image or the application of image effects (e.g. greyscale display, contrast, brightness, virtual background).

Post-production

In post-production, also known as "video editing", parts of the video footage are selected and compiled in the desired sequence. Images can be inserted to separate individual chapters, effects can be applied, music or a voice-over can be added. There are no limits to creativity here.



For instructions on post-production with "Kdenlive", see also the learning videos by Julia Hauser on TUBE.



Publication

Once the video is ready, the question of where and how to make it available to learners needs to be addressed. For teachers at TU Graz, the following options are available:

- TUBE
- TeachCenter (enrich an interactive TUBE video with H5P)
- for OER-certified teachers: upload to the OER repository

2: <https://tube.tugraz.at/paella/ui/browse.html?series=c812ea1e-a15f-4177-b8bf-5aa1267fb71e>