

bioCEED, Centre of Excellence in Biology Education



Making (use of) Videos for Teaching and Learning

Jonathan Soulé
bioCEED

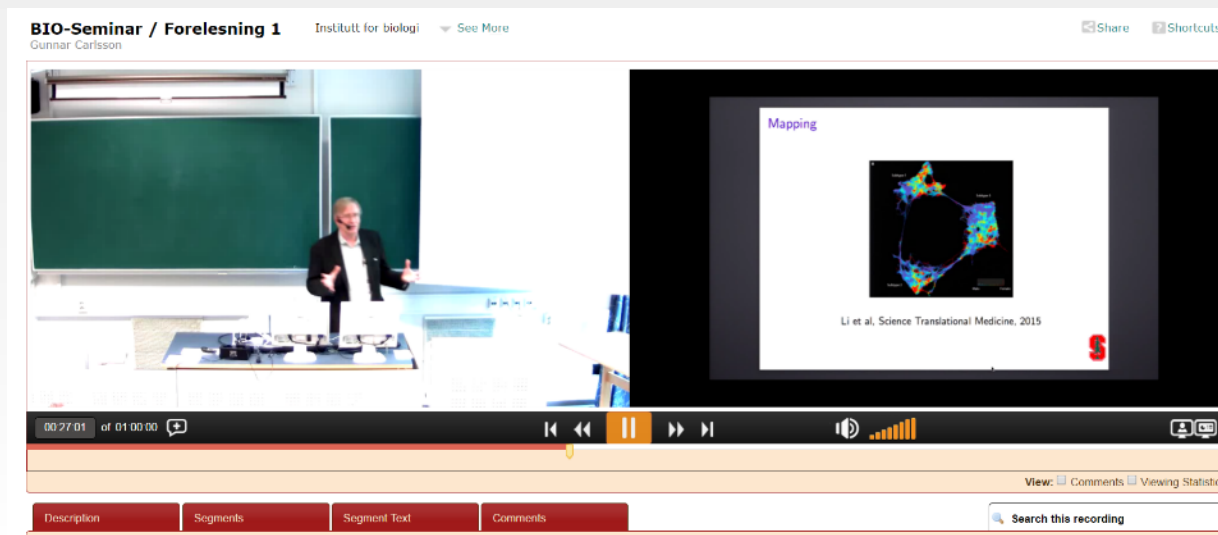
UNIVERSITY OF BERGEN





What type of video?

- Videonotes





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- Videonotes
- Tutorials/PreLab/Short lectures

www.bioced.no

PRIMER 6 - [Communities]

File Edit Select View Analyse Tools Window Help

BACT_databab_Made
Communities
Sp_richness

Other

	074M 31.1	074W 31.1	074P 31.1	122M 31.1	122W 31.1	122P 31.1	254M 31.1	254W 31.1	254P 31.1	21
100	59.667	0	0	56	0	0	0	0	0	
103	59.333	0	0	44.667	0	0	49	0	181.33	81
106	87.667	0	0	108.33	0	0	123	0	0	
109	91	0	0	121.33	0	0	60	0	0	
112	59	0	0	49.667	0	0	47	0	0	
115	63.667	0	0	94.333	0	0	67	0	0	
118	46.333	0	0	89	0	0	0	0	73.333	
121	74	0	0	119	0	0	62	0	0	
124	221.67	0	0	317.67	0	0	162	0	0	
127	131	0	0	214	0	0	92	0	0	
130	68.333	0	0	136	0	0	64	0	0	
133	71.667	0	0	163.67	0	0	89	0	0	
136	58	0	0	134.33	0	0	55	0	0	
139	54	0	0	92.333	0	0	0	0	0	
142	33.667	0	0	101.33	0	0	0	0	0	
145	111	0	0	137.33	0	0	81	0	0	
148	71.333	0	0	148.33	0	0	0	0	0	
151	188.67	382.67	308.67	183	644.33	780	290	516.33	366	
154	31.667	0	0	137.33	0	0	0	0	0	
157	0	0	0	32	0	0	0	0	0	
160	111.33	27.333	0	216	0	0	76	0	0	
163	41.667	26	0	37	0	71.667	0	0	0	
166	61.667	331.67	0	109.33	0	0	0	0	0	
169	46.667	0	25.667	81	160.67	0	0	0	0	
172	68.333	0	0	101.33	0	0	65	0	0	
175	73.333	0	0	148	96.667	40	72	0	0	
178	80.667	0	0	142.33	0	0	64	0	0	
181	82.333	0	0	94.333	0	0	0	0	0	
184	64.333	0	0	24.333	0	0	0	0	0	

Row 23 Col 3



What type of video?

- Videonotes
- Tutorials/PreLab/Short lectures
- Streaming LIVE

www.bioceed.no





What do they have in common?



What do they have in common?

- Focus on the content of your screen
 - > Powerpoint presentation/course material



What do they have in common?

- Focus on the content of your screen
 - > Powerpoint presentation/course material
- Your voice/text is central



What do they have in common?

- Focus on the content of your screen
 - > Powerpoint presentation/course material
- Your voice/text is central
- Your presence on screen is optional (but welcome).



Recording lectures (Videonotes)



Making videonotes (videonotat)

- Filming your own lectures
 - as support material for your students (*pros and cons...*)



Making videonotes (videonotat)

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 - for later use, reuse and abuse



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- UiB's collection of videos on <http://video.dig.uib.no/engage/ui/index.html>?
- UiA's extensive collection of videos on video.uia.no
- 2 solutions
 - DigUiB's videonotes – ask someone to film you
 - Techsmith Relay – film your own lecture



Solution 1: DigUiB's videonotes

- Automatic recordings of the lectures including:
 - Screencast
 - Voice
 - Camera
 - Index
- www.uib.no/diguib





Where is it available at UiB?

These rooms have fixed recording equipment:

- JU: Auditorium 1, Dragefjellet
- JU: Auditorium 2, Dragefjellet
- MN: Auditorium 1, Realfagsbygget
- MN: Auditorium A, Allégaten 66 (Temporarily out of order)
- MN: Stort auditorium, Høyteknologisenteret
- MO: Seminarrom 234, Overlege Danielsens hus
- MO: Auditorium 1, BB-bygget

- SV: Stort auditorium, Lauritz Meltzers hus
- SV: Lite auditorium, Lauritz Meltzers hus
- HF: Auditorium A, Sydneshaugen skole (Temporarily out of order)
- HF: Auditorium B, Sydneshaugen skole
- PS: Auditorium 129, Bjørn Christiansens hus
- PS: Auditorium 128, Bjørn Christiansens hus
- Egget, Studentsenteret



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- Egget, Studentsenteret



How to - step 1

- Order it at DigUiB!
- Fill up the form online

Bestilling av videonotat

Her kan du som er foreleser bestille/endre bestilling av videonotat for forelesninger dine i de gem.som.uib.no uib.no. Tjenesten har status pilot, noe uttallighet kan oppleves. Spørsmål kan sendes som e-post til dig@uib.no.

In this form you can order/change orders for videonotes in [these rooms](http://gem.som.uib.no). Video notes is in a pilot phase, so some stability issues might occur. Contact: dig@uib.no.

1 Hvem 2 Hushjør 3 Annet 4 Gjennomgyn / Review

Navn / Name *

First Last

E-post / E-mail *

Telefon / Phone *

Emnekode/ Tittel på foredrag / Course code/Title *

Siste eksamensdato / Last exam *

MM DD YYYY

Rom / Room *

Foredragsholder(e) / Lecturer *

Jeg vil bestille / I want to order:

☐ Opptak av enkelthendelse / Single recording

☐ Opptak av basert på emnekalender / Recording based on Course calendar

☐ Endringer i tidligere bestilling / Changes in previous ordered recording



How to - step 1

- Order it at DigUiB!
- Fill up the form online
 - Single lecture
 - Whole course*

* Only lectures at locations equipped for recording

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Her kan du som er foreleser bestille/endre bestilling av videonotat for forelesninger dine i de gem.som.uib.no uib.no.
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Rom / Room *
Rom

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Foredragsholder(e)

Jeg vil bestille / I want to order:
☐ Opptak av enkeltstående / Single recording
☐ Opptak av basert på emnekalender / Recording based on Course calendar
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Continue



How to - step 2

- Show up at your own lecture



How to - step 2

- Show up at your own lecture
- Turn on the projector... (needed to activate audio system)



How to - step 2

- Show up at your own lecture
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- **USE THE MICROPHONE**
 - > No mic, no sound!!!



How to - step 2

- Show up at your own lecture
- Turn on the projector... (needed to activate audio system)
- **USE THE MICROPHONE**
 - > No mic, no sound!!!

Recording starts 2-3 minutes before the lecture and ends 2-3 minutes after the lecture (as defined in the form or the time schedule).



How to - step 3

- Get/give access to your video at:

<http://video.dig.uib.no/engage/ui/index.html?>



[KJEM110] Forelesning KJEM110 / Labforelesning [KJEM110] 16
by Bjørn Grung
Fri, Oct 21 2016 - 10:13



[ENERGI200] Forelesning ENERGI200 / Forelesning [ENERGI200] 18
by Peter M Haugan / Finn Gunnar Nielsen / Dorte Nørgaard Madsen
Thu, Oct 20 2016 - 16:13



[KJEM210] Øving KJEM210 / KJEM210: Felles gjennomgang av regneøvelser [KJEM210] ...
by Kristine Spilås
Thu, Oct 20 2016 - 14:13



Solution 2: Techsmith Relay

- Simple solution for screencast
 - Capture (one of) your screen(s)
 - Capture your webcam (optional)
 - Capture your voice

TechSmith Relay®



Solution 2: Techsmith Relay

- Simple solution for screencast
 - Capture (one of) your screen(s)
 - Capture your webcam (optional)
 - Capture your voice
- «Free» to use at UiB (Uninett)
- «Free» storage of videos on remote server

TechSmith Relay®



Solution 2: Techsmith Relay

- Simple solution for screencast
 - Capture (one of) your screen(s)
 - Capture your webcam (optional)
 - Capture your voice
- «Free» to use at UiB (Uninett)
- «Free» storage of videos on remote server
- Videos are accessible 24/7 via a link

TechSmith Relay®



How to - step 1

- Sign up at DigUiB!

Screencast

A screencast is a digital recording of computer screen output, also known as a video screen capture, often containing audio narration. A screencast is essentially a movie of the changes over time that a user sees on a computer screen, enhanced with audio narration.



Published: 10.07.2015 (Last updated: 21.03.2016)

A screencast can be used to make an introduction, a lecture or speech, user testing and more. The software TechSmith Relay is available for all UiB employees.

[Get started](#) [Access and share](#) [Support](#)

Get started

1. Register an account for TechSmith Relay by logging in using FEIDE.
2. Ask the UiB IT-support to install TechSmith Relay on your computer by registering a query in Issue tracker.
3. Your computer needs a built-in microphone or use an USB-headset for the best sound quality.
4. If you also need to be recorded in the screencast, you need a built-in camera or a webcamera connected to your computer.
5. Once installed, TechSmith Relay is ready for use.
6. Sign in to your account.

SCREENCAST

A screencast is a digital recording of computer screen output, also known as a video screen capture, often containing audio narration.

The term screencast compares with the related term screenshot; whereas screenshot generates a single picture of a computer screen, a screencast is essentially a movie of the changes over time that a user sees on a computer screen, enhanced with audio narration.

You can make a screencast on your own computer (screen, audio and video) or mobile (audio and video).

TechSmith Relay is available for all UiB employees through the national UNINETT eCampus project.



How to - step 1

- Sign up at DigUiB!
- www.uib.no/diguib/90236/screencast



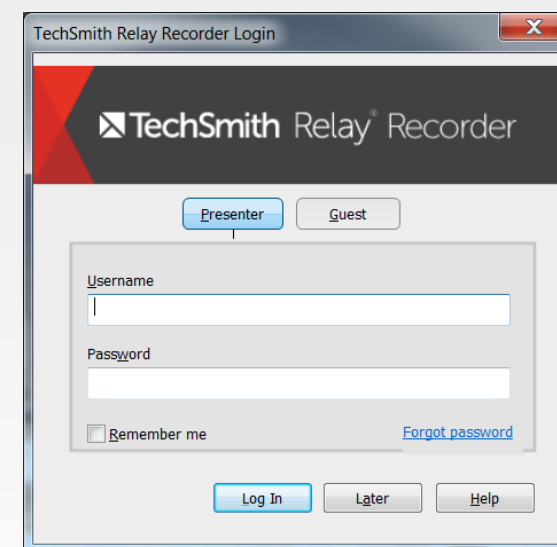
How to - step 1

- Sign up at DigUiB!
- www.uib.no/diguib/90236/screencast
- Get the software installed on your PC
 - Via BRITA (client PCs)
 - Download it for free



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 - Download it for free
- Run the program and log on with your new credentials
 - xxxxxx@uib.no + new password



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How to – step 2

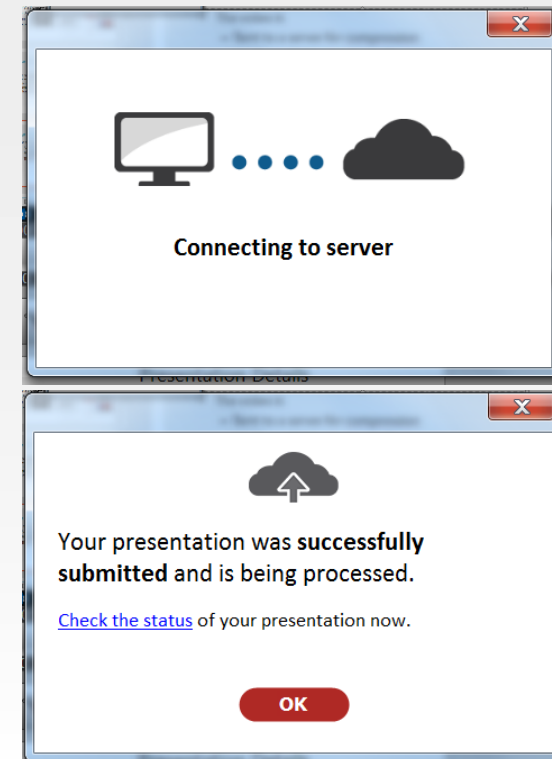
1. set up the microphone
2. set up the webcam
3. choose the display/screen to capture
4. test the setup
5. Push REC





How to – step 3

Once done, submit the video.



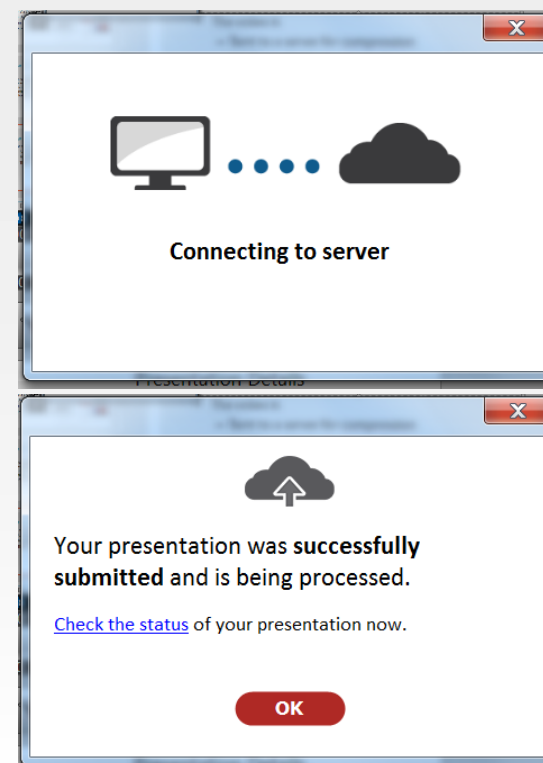


How to – step 3

Once done, submit the video.

The video is :

1. Sent to a server for encoding





How to – step 3

Once done, submit the video.

The video is :

1. Sent to a server for encoding
2. Made available via an email

Hei Jonathan Soule,

Presentasjonen din fra den 21.10.2016 21:59:57 er ferdig konvertert og klar for deling :-)

Gå til "Min Relay" for en oversikt over alle dine presentasjoner:
<https://support.ecampus.no/techsmithrelay/min-relay/>

Mvh,
UNINETT eCampus
<https://support.ecampus.no/>

Title: test
Description:
Duration: {f:Duration[3200,000]}

Type	Size	Link
MP4 with Smart Player (480p)	878 KB	View...
MP4 with Smart Player (720p)	960 KB	View...
MP4 with Smart Player (1080p)	1,10 MB	View...
MP3 (Audio Only)	34,8 KB	View...



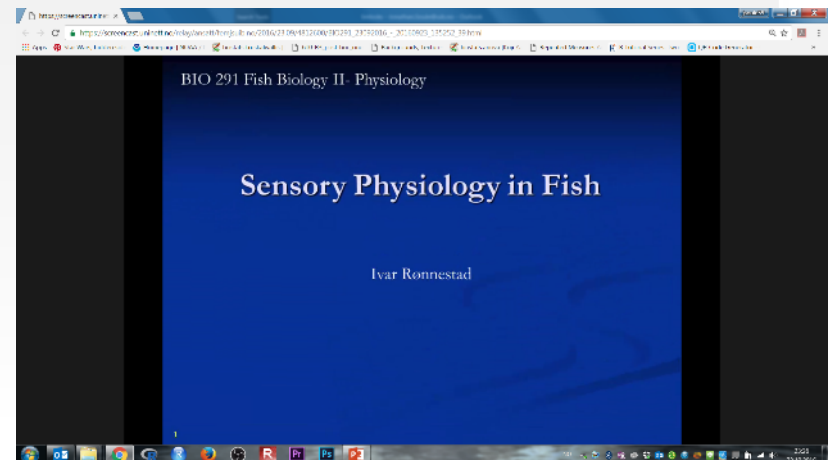
How to – step 3

Once done, submit the video.

The video is :

1. Sent to a server for encoding
2. Made available via an email
3. Displayed via net browser

www.bioceed.no





Flipped classrooms

Prelab

Tutorials



Producing tutorials/short videos

- Flipped classroom
 - Making videos to teach something ahead of colloquia
 - Theme/subject of the day
 - Exercise/assignment



Producing tutorials/short videos

- Flipped classroom
 - Making videos to teach something ahead of colloquia
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 - Exercise/assignment
- PreLab
 - Making introductory videos to lab activities
 - «What to know before dissecting today's beast»
 - «What are the dangers of today's experiment»



Producing tutorials/short videos

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- 2 solutions:
 - Techsmith Relay
 - OBS Studio



The concept

- Preparing a video in your office, at the bench, on field...



The concept

- Preparing a video in your office, at the bench, on field...
- What do you need to capture:
 - Speaker's voice



The concept

- Preparing a video in your office, at the bench, on field...
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 - Speaker's face (optional but...)



The concept

- Preparing a video in your office, at the bench, on field...
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 - Speaker's voice
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 - Teaching material on screen
 - Screencast



The concept

- Preparing a video in your office, at the bench, on field...
- What do you need to capture:
 - Speaker's voice
 - Speaker's face (optional but...)
 - Teaching material on screen
 - Screencast
 - Teaching material from handheld webcam/microscope/loupe
 - Shown on full screen via extra software (webcamviewer)



Solution 1: Techsmith Relay

1. set up the microphone
2. set up the webcam
3. choose the display/screen to capture





Solution 1: Techsmith Relay

1. set up the microphone
2. set up the webcam
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4. test the setup





Solution 1: Techsmith Relay

1. set up the microphone
2. set up the webcam
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4. test the setup
5. Push the button REC





Solution 1: quick example

bioCEED, Centre of Excellence in Biology Education

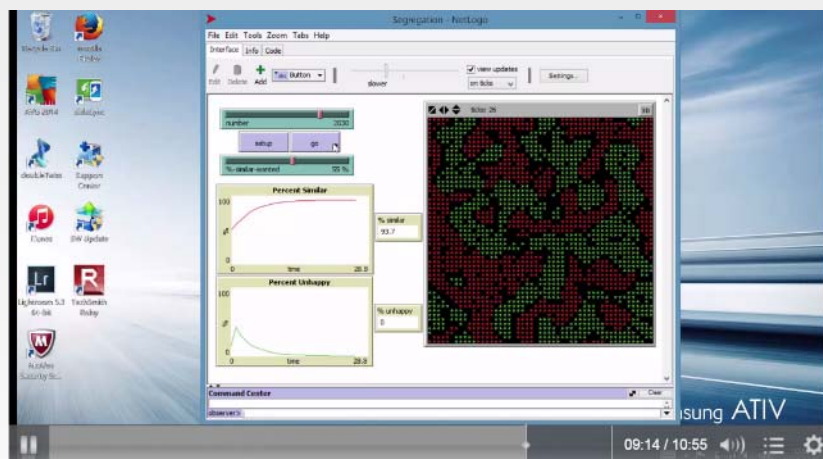
Making (use of) Videos for Teaching and Learning

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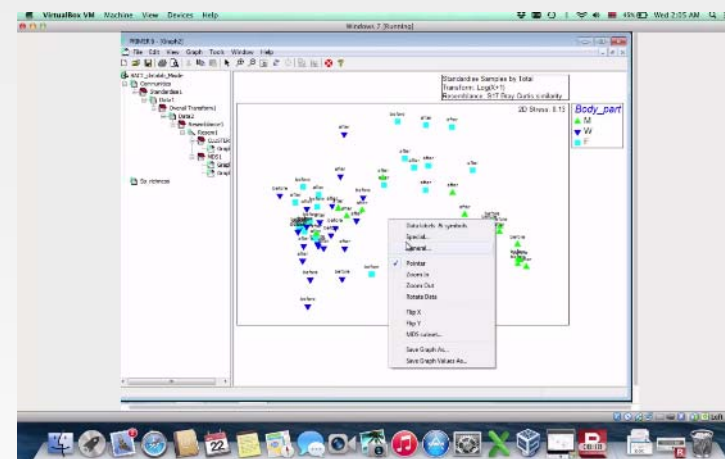
UNIVERSITY



A couple of examples



Anders Opdal introducing NetLogo
on biostats.uib.no



Adèle Mennerat introducing an
exercise in BIO201 on biostats.uib.no



Solution 2: Open Broadcaster Software

- aka OBS Studio
- Free, open source
- <https://obsproject.com/download>



Open Broadcaster Software



Solution 2: Open Broadcaster Software

- aka OBS Studio
- Free, open source
- <https://obsproject.com/download>
- More advanced than Relay
 - more flexible as well
 - Not as simple to set up



Open Broadcaster Software



Solution 2: Open Broadcaster Software

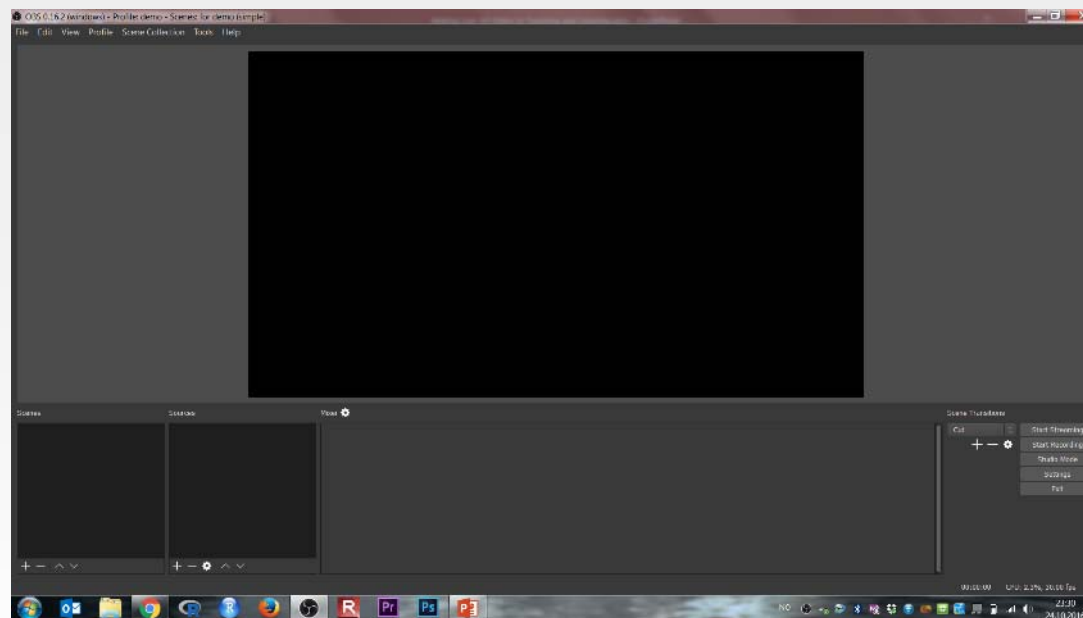
- aka OBS Studio
- Free, open source
- <https://obsproject.com/download>
- More advanced than Relay
 - more flexible as well
 - Not as simple to set up
- Encodes the video while recording
 - > need stronger CPU/GPU



Open Broadcaster Software



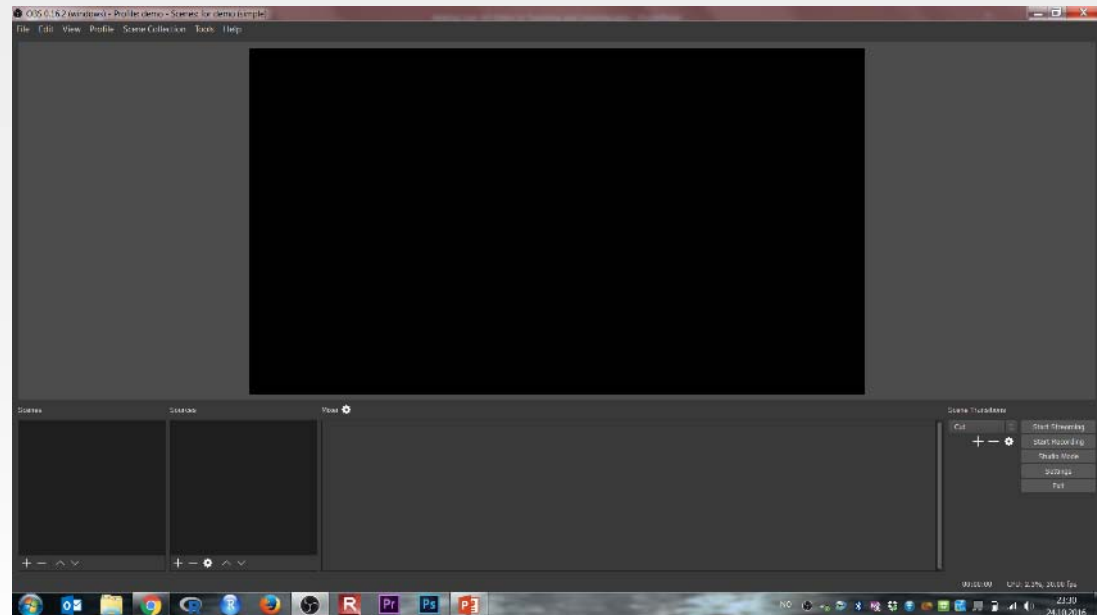
Solution 2: Open Broadcaster Software





Solution 2: Open Broadcaster Software

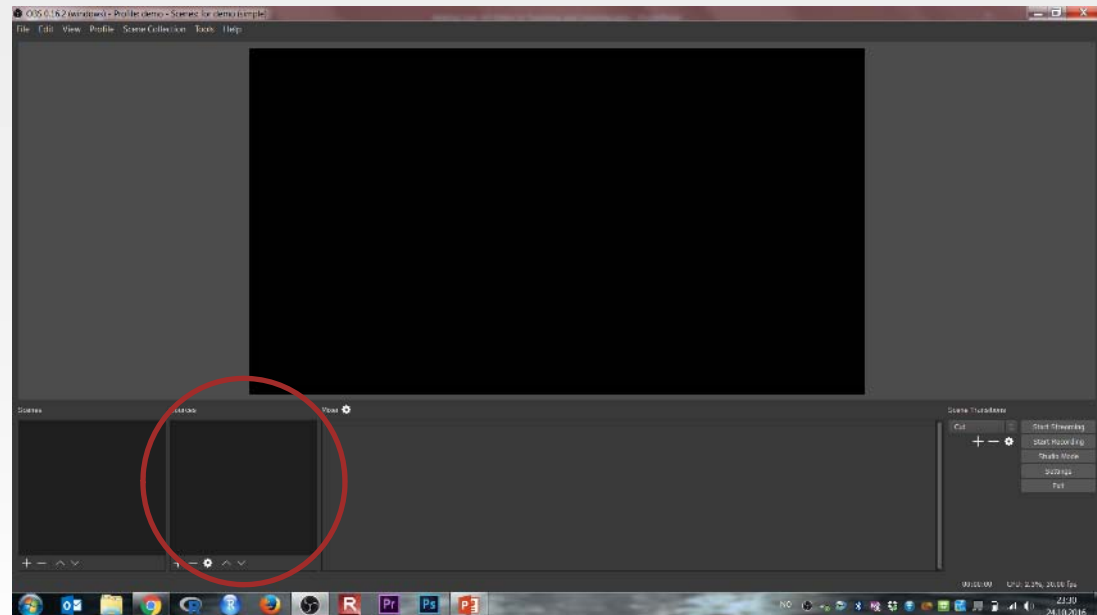
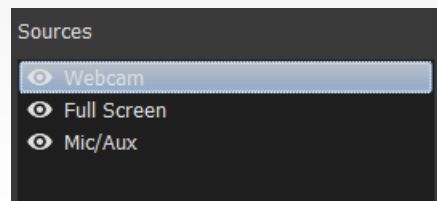
1. Set up your display/scene
2. Set up your microphone





Solution 2: Open Broadcaster Software

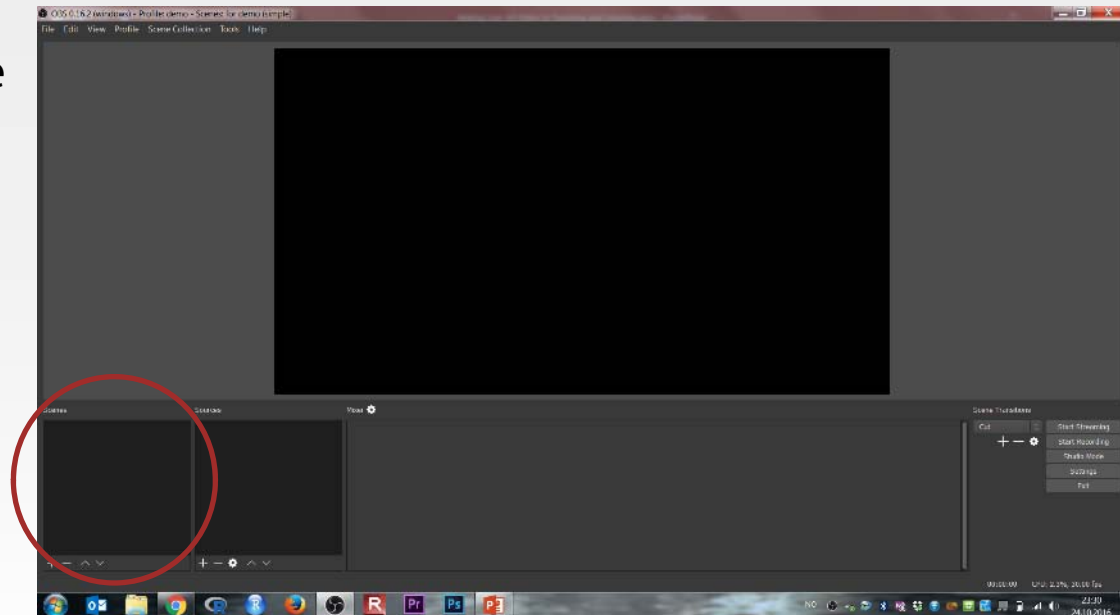
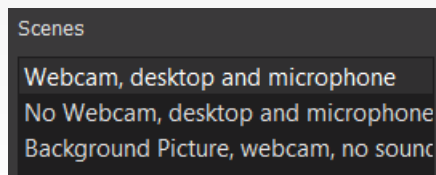
1. Set up your display/scene
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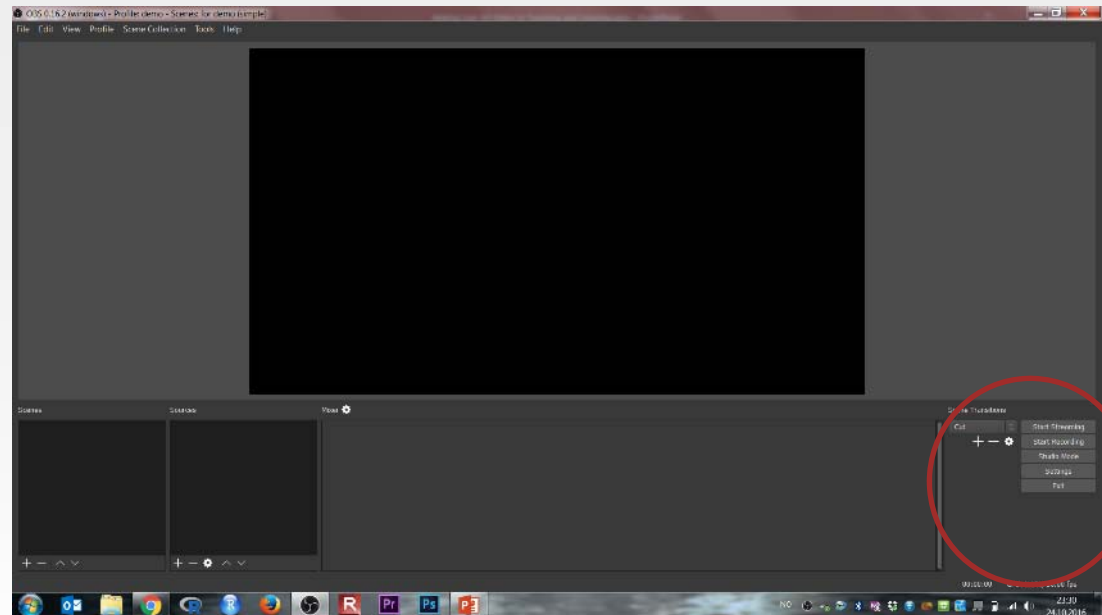
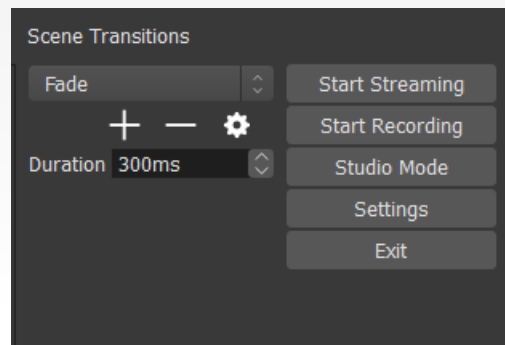
1. Set up your display/scene
2. Set up your microphone
3. Create different scenes





Solution 2: Open Broadcaster Software

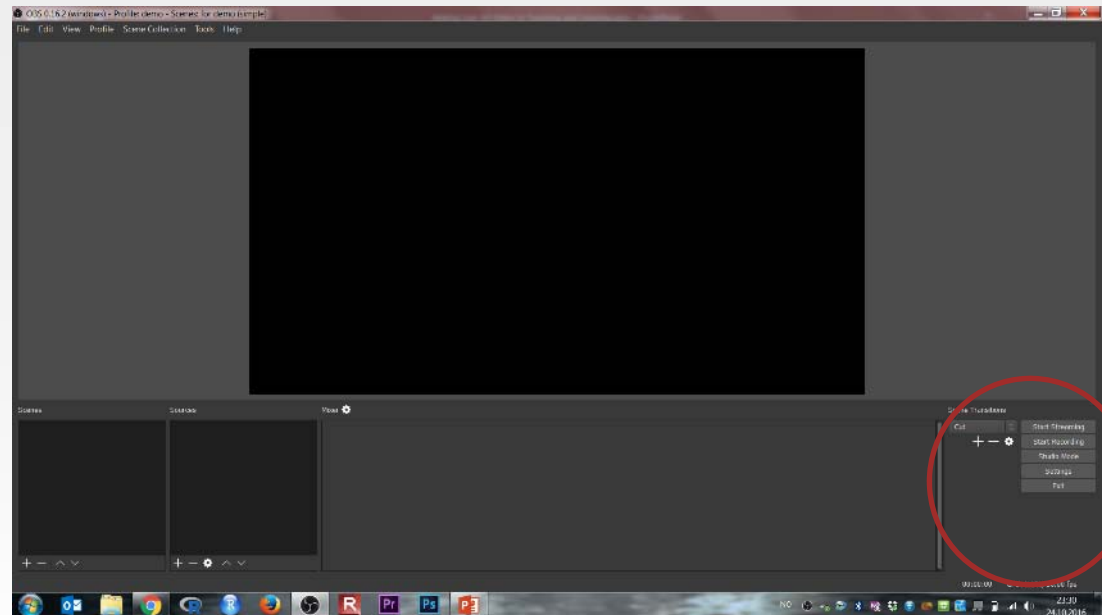
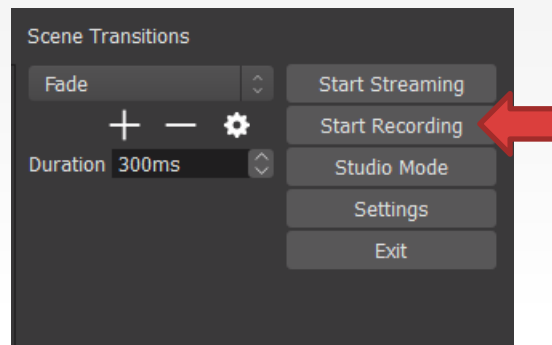
1. Set up your display/scene
2. Set up your microphone
3. Create different scenes
4. Create a transition





Solution 2: Open Broadcaster Software

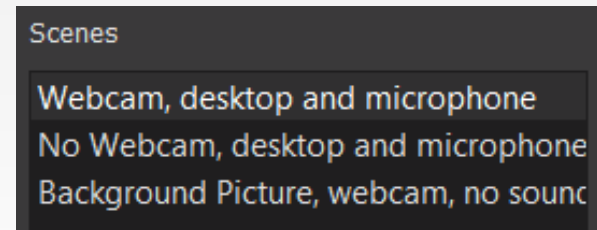
1. Set up your display/scene
2. Set up your microphone
3. Create different scenes
4. Create a transition
5. Record it!





Solution 2: scenes in OBS Studio

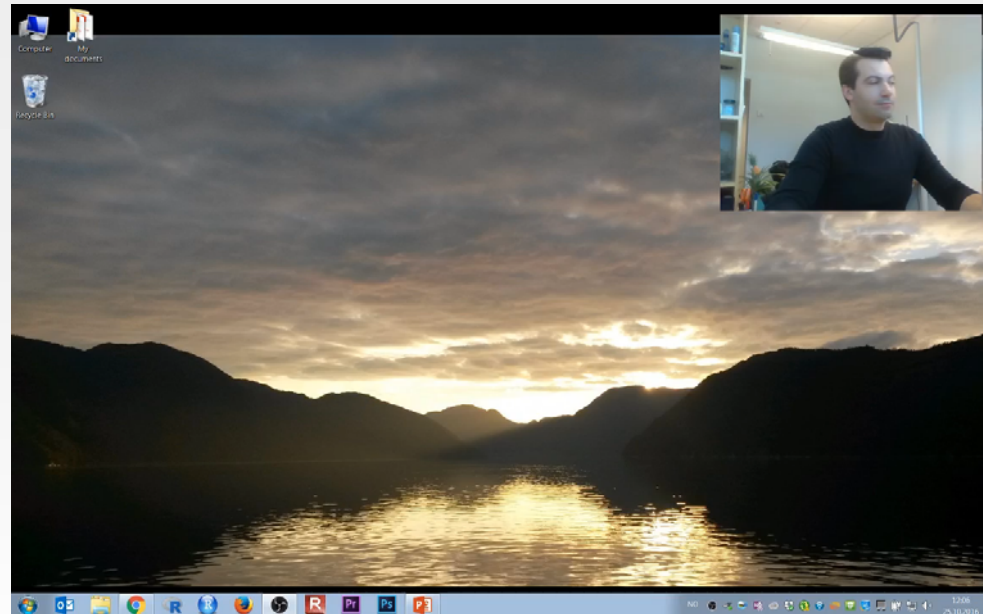
- Scenes allow to alternate between:
 - Softwares, windows
 - Remove an item (webcam)
 - Play additional video material
 - Show a document
 - ...





Solution 2: quick example

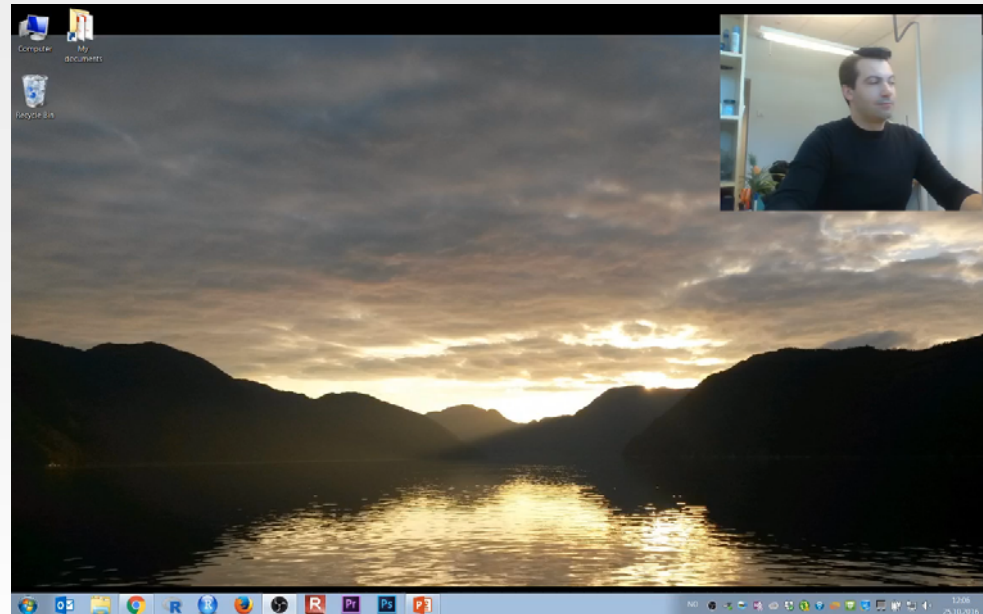
1. Scene 1: webcam ON





Solution 2: quick example

1. Scene 1: webcam ON
2. Scene 2: webcam OFF
3. Scene 1: webcam ON
4. Scene 2: webcam OFF
5. Scene 3: the french touch





LIVE streaming

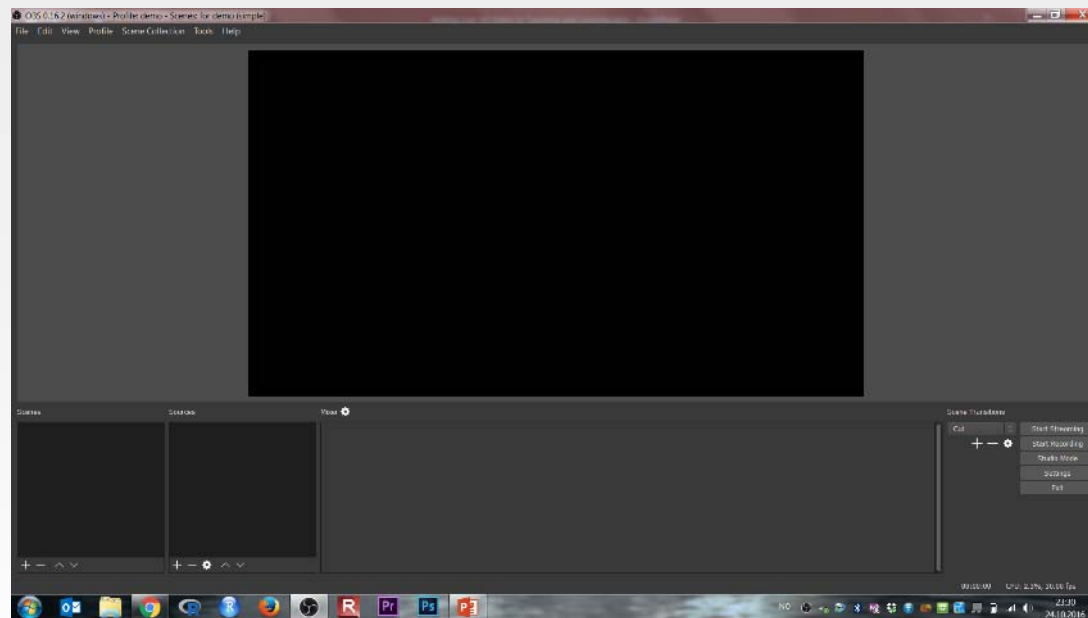


Streaming events

- Streaming
 - Live broadcasting of teaching activities
 - Live broadcasting of conferences, workshops...
- 2 solutions:
 - OBS Studio
 - DigUiB's platform

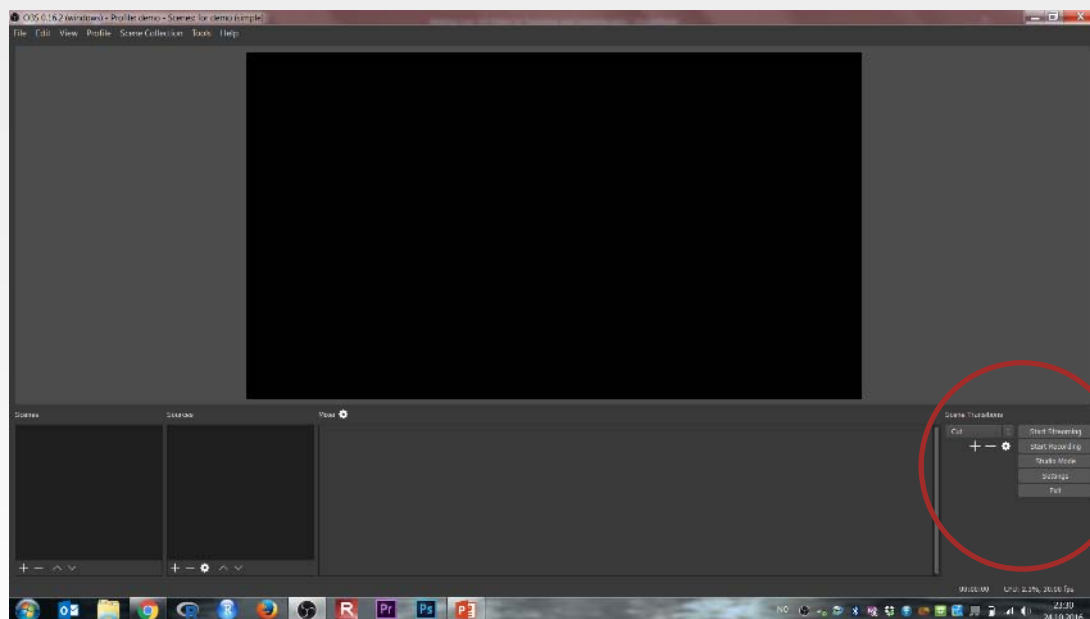
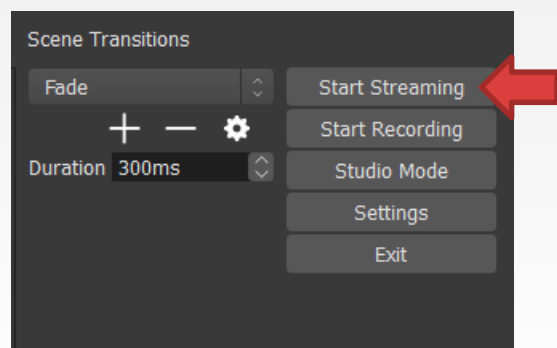


Solution 1: OBS Studio via server



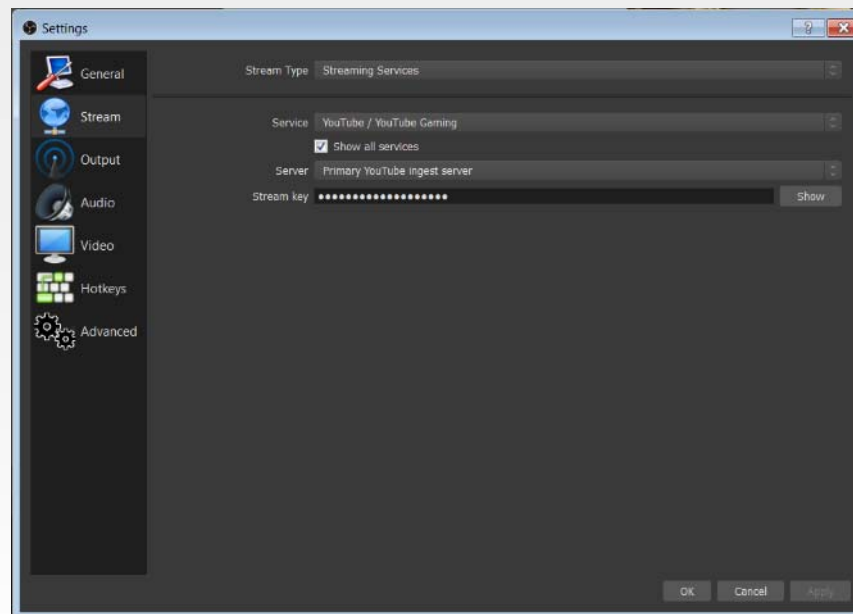


Solution 1: OBS Studio via server



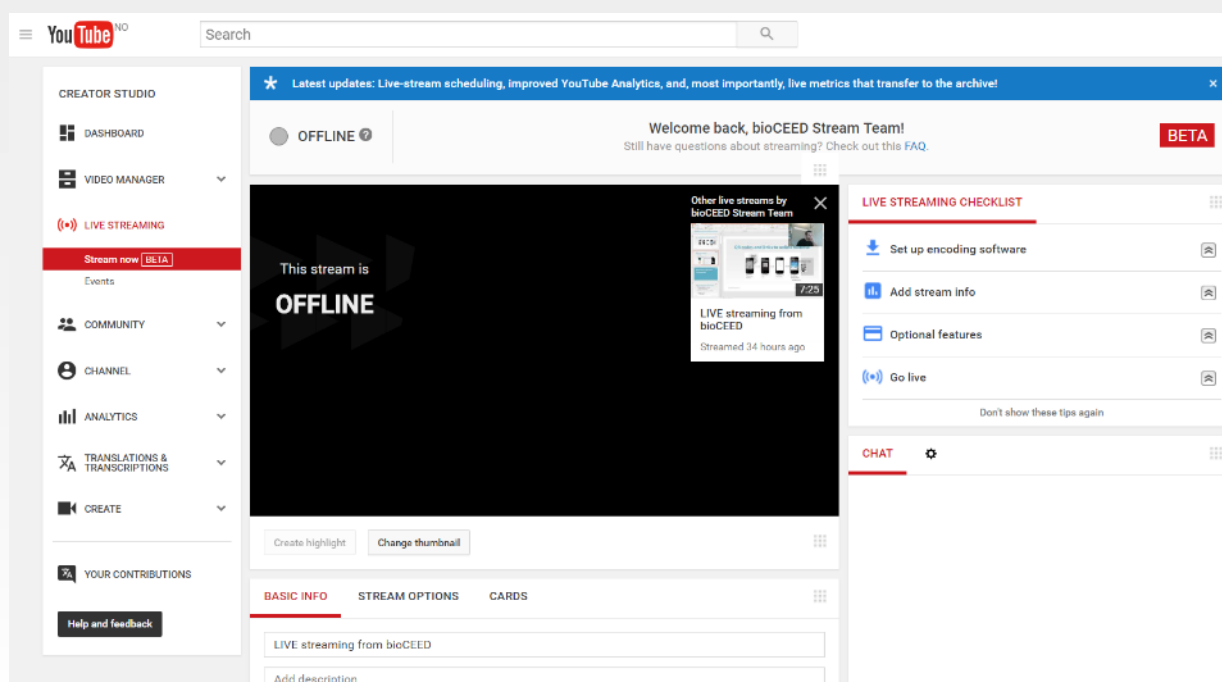


Solution 1: OBS Studio via Youtube





Solution 1: OBS Studio via Youtube

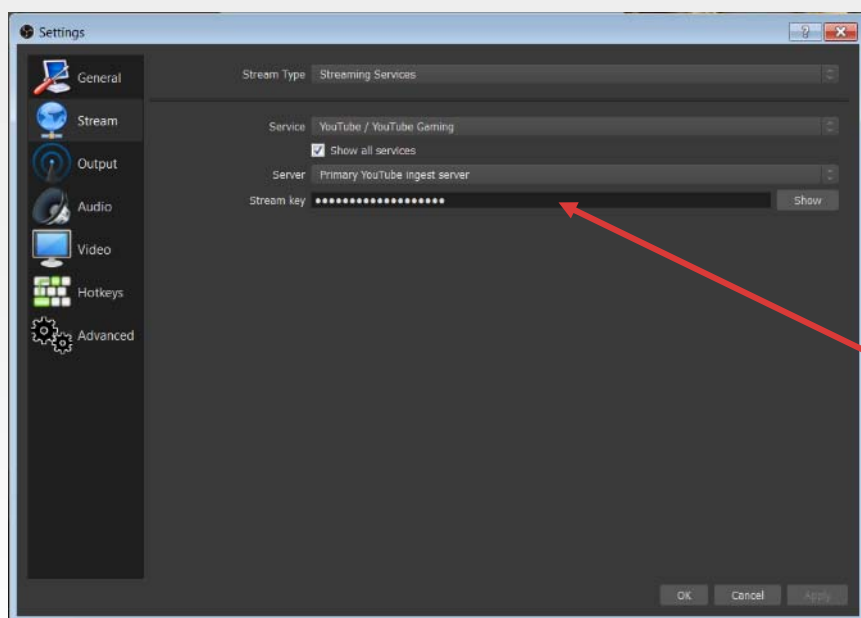


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Solution 1: OBS Studio via Youtube



ENCODER SETUP

Server URL

rtmp://a.rtmp.youtube.com/live2

Stream name/key

.....

Reveal



Solution 2: DigUiB

- Contact DigUiB (via the webpage)
- Fill up the form
- Enjoy!

Forespørsel opptak/strømming av arrangement
UiB tilbyr opptak/strømming av arrangementer på UiB. Søk her om opptak/strømming fra oss. Vi vurderer forespørselen og hjelper enten selv eller gir råd over hvem ellers kan hjelpe.
Frist: minst 4 uker for arrangementet. I noen tilfeller kan 2 uker være nok.
Det er viktig at du som arrangerer dette informerer og avklarer med foredragsholdere at du samtykker til strømming og opptak.

Kontaktperson

UiB-brukernavn *

Navn *

Fakultet/Avdeling/Institutt/Seksjon *

Telefon *

E-post *

Arrangement

Hva heter arrangementet? *

Rom/sted *
☐ Universitetsaulen
☐ Annet

Adresse, rom

Fra dato *
 / /

DD MM YYYY

Fra tid *
 :

HH MM

Til dato *
 / /

DD MM YYYY



Solution 2: example

mediasite

bioCEED

Fordeler

- Tilgjengelighet
- Kostnader
- Kommunikasjon
- Læring
- Motivasjon
- Interesse

Ulemper

- Kompetanse
- Kostnader
- Tregheter
- Tekniske problemer

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Things to think about...



What it takes to make videos



What it takes to make videos

- **Time** (*A whole lot of precious time*)
 - Setup + duration of the lecture
 - Often need multiple takes



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- **Money** (*A whole lot of spending money*)
 - Most softwares are free/available via UiB/IT-Avd
 - Hardware
 - Sound quality: 1000-4000 NOK
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- **Good teaching material** (...)
 - Clarity
 - Visual stimuli
 - Keywords, pointer,...



Hardware

- Buy yourself a good microphone, please!



Audio-Technica AT2020-USB



Røde Filmmaker kit



Hardware

- Buy yourself a good webcam (HD), please!



Microsoft Lifecam



In summary...



Software 1: Techsmith Relay

- simple screencast and videonotes:
- Free at UiB, PC and Mac friendly
- File encoding and storage on remote server
- Provides you with a link to the video sent via email
 - NB: email delivery within minutes up to 36 hours
- Limited possibilities (hard to mess up but limited outcomes)



Software 2: OBS Studio

- Advanced screencast and streaming
- Flexible platform with many possibilities
- Free, PC, Mac and Linux friendly

- Weak PCs might suffer...
- Local storage of videofiles
- More complexe to use but more possibilities



DigUiB

- Provides support for Techsmith Relay
(<http://www.uib.no/en/diguib/90236/screencast>)
- Provides services:
 - Videonotes
(<http://www.uib.no/en/diguib/90227/recording-lectures-videonotes>)
 - Live streaming
(<http://www.uib.no/en/diguib/90250/livestream>)
- Contact them!
- Check **www.uib.no/diguib/**



Any interest for:

- Workshop?
 - Techsmith Relay
 - OBS Studio



Any interest for:

- Workshop?
 - Techsmith Relay
 - OBS Studio
- Website for hosting teaching videos?
 - prelab.uib.no ?
 - flipped.uib.no ?



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