

Angel Introduction: Camera and Video Mixer

August 16, 2025

C3VOC



<https://github.com/voc/engelschulung>

General

- We will stream, record and publish nearly all talks with your help
- You can operate the cameras and video mixer
- At do-not-record talks we also need angels
- We (people from c3voc) will be there to help
- The live stream video signal will also be the final recording
- We aim for consistent quality, but everybody make mistakes – don't blame yourself!

General disclaimer

- If you like to see a talk, don't work in the talk.
- Focus will be on content production and not on contents of the talk.
- You will probably miss the chance of asking questions.

Angeltypes

Angeltypes

- A/V Angels:
 - Camera Angels
 - Video Mixer Angels
 - Audio Mixer Angels
- A/V Technician
- C3VOC Crew

A/V Angel: Role Camera

- One camera angel per camera in each lecture hall
- Operates the cameras in the lecture halls
- Maintains good camera settings

A/V Angel: Role Video Mixer

- One person per lecture hall
- Operates the video mixer to produce an interesting video
 - Switches between cameras and slides
 - Composes pictures with multiple sources
 - You decide, which sources to show
- Mixed video feed is used for both, live-stream and the recordings
- You might get assistance by a director on challenging talks

A/V Angel: Role Audio Mixer

- This might also be the task of the video mixing angel
- Mute and un-mute microphones when they are used/ not used
- Change the amplification for individual microphones
- Check the audio level (loudness) for stream

C3VOC Crew

- 2nd to n-th level support in the lecture halls.
- Responsible for keeping stuff working
- Familiar with all equipment in use
- Able to fix (nearly) all the issues
- Reachable via phone/ DECT

A/V Technician

- Direct support for you in the lecture hall
- Makes sure, that speaker laptop is connected
- Responsible for the speaker's headset microphone
- Communication gateway to the Stage Managers and external crew
- Your **first contact for any technical issues** in the lecture hall
- Shifts usually last four hours

Basics

Closeup Shot

- Show the head and upper part of the body
- Leave the width of one hand above the head
- Eyes should be close to the upper third line

Closeup Shot: Good Example



Figure 1: Good closeup shot

Closeup Shot: Good Example



Figure 2: Good closeup in Lecture Mode

Closeup Shot: Bad Example



Figure 3: Half a head - not good

Closeup Shot: Bad Example

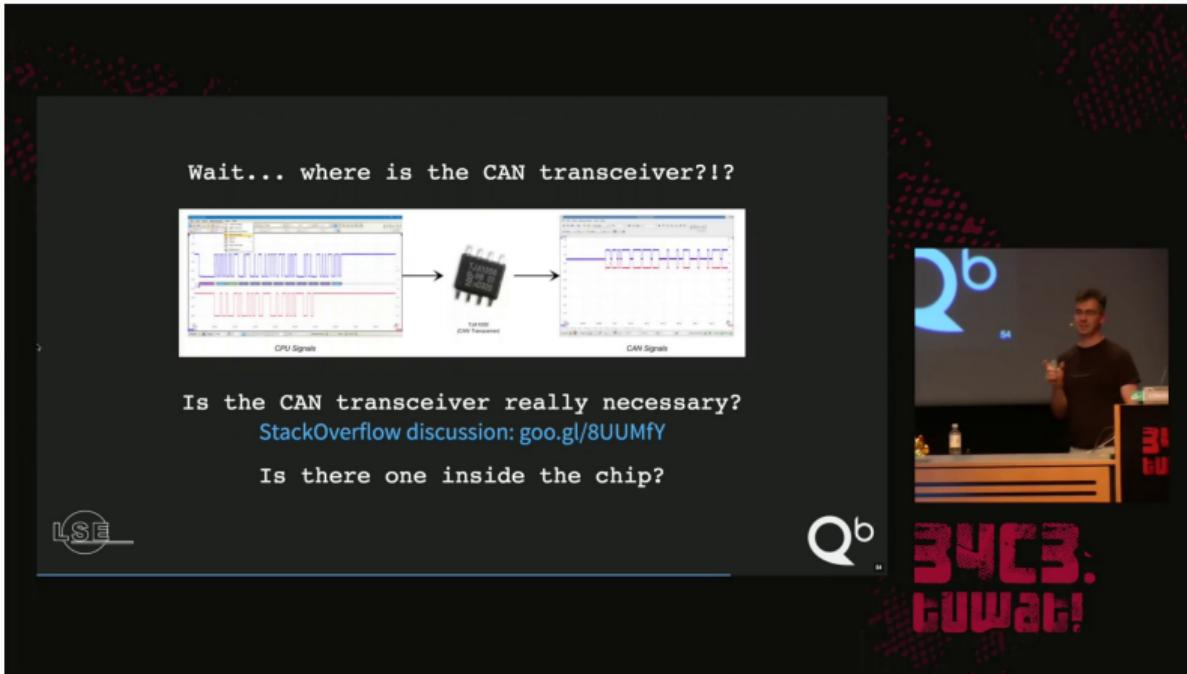


Figure 4: Too far out for a good Lecture Mode image

Medium Shot: Good 1



Figure 5: One person, the lectern and some context

Medium Shot: Good 2



Figure 6: Two persons on stage

Overview

- Shows the complete stage and the people on it
- Heads of the crowd are OK, if it's dark enough
- Don't use this camera to show the slides - use lecture mode instead
- Locked off, do not move.

Wide Shot: Good Example



Usual Talk Timeline

- Please be on time when your shift starts
- Get to know your fellow angels, check the camera and mixer
- Talk starts with an introduction by the herald
- Speaker starts talk
- Q&A session
- Talk ends with "thank you" and applause
- Hand over to the next angels

Camera Hardware

Hardware Camera Controls Panasonic



Figure 7: Panasonic Cam

Cameras are in manual mode because of difficult lighting situation.

Left Ring/red Focus - control sharpness of the image.

Middle Ring/green Zoom - vary the focal length.

Right Ring/blue Iris - will have to be adjusted throughout the day. If there is anything wrong, contact C3VOC helpdesk.

Zoom Control Panasonic



- For smooth zoom use the zoom buttons.
- Gentle touch ⇒ slow zoom
- Top Buttons fixed speed

Figure 8: Panasonic Cam

Display Indicators Panasonic

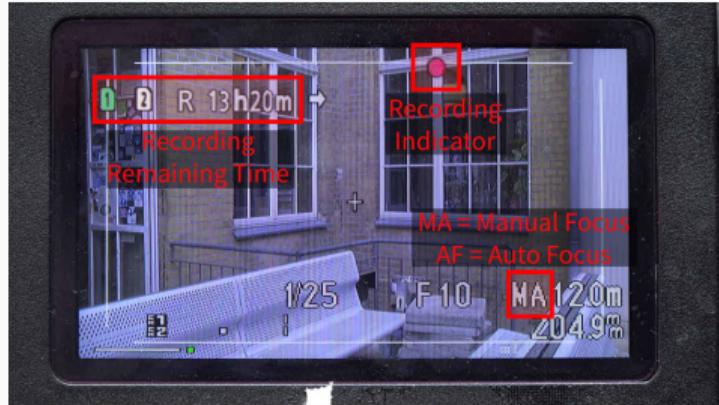


Figure 9: Panasonic Display Indicators

Rec Indicator The recording must always run, even during the break.

Focal Indicator Use only manual focus!

Remaining Time It must have enough remaining time before talk.

Alert

Alert the A/V-Technician if something's wrong.

Hardware Camera Controls Sony PXW-Z200



Figure 10: Sony Cam

Cameras are in manual mode because of difficult lighting situation.

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Right Ring/blue Iris - will have to be adjusted throughout the day. If there is anything wrong, contact C3VOC helpdesk.

Zoom Control Sony



- For smooth zoom use the zoom buttons.
- Gentle touch ⇒ slow zoom

Tripod



- Should be level - check the water bubble.
- Variable brakes - can be adjusted to your needs.
- Tilt axis should be balanced, so that the camera doesn't tilt up or down on its own.
- Pan axis is needed all of the time. Set it so you can do smooth pans all over the stage.

Alert

Alert the A/V-Technician if something's wrong or misplaced.

Figure 12: Tripod

SD-Card Recording

- Two SD-Cards in every Camera
- Backup Recording
- Turn on Recording before first shift in the morning -> Red Dot somewhere in the Display.
- Control Recording Time remaining.

Alert

Alert the A/V-Technician if something's wrong or not running.

Video Mixer Tools

Voctomix2 - Overview

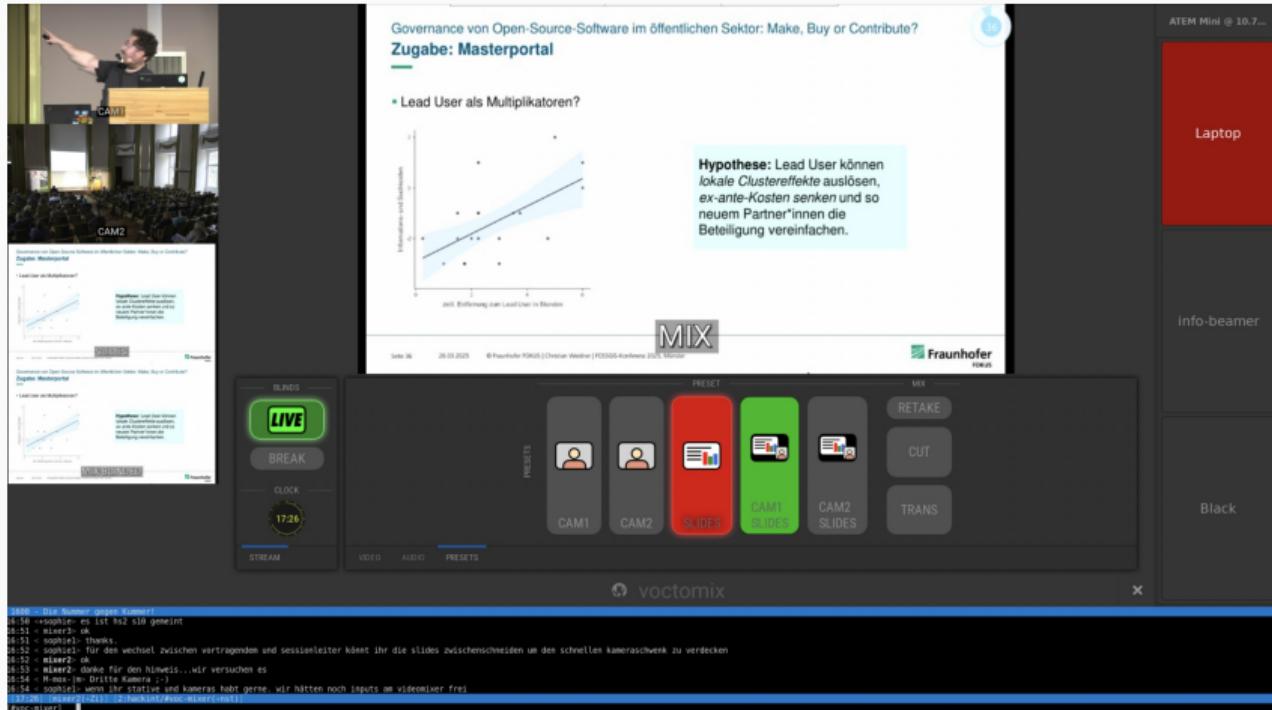


Figure 13: Voctomix2 - Overview (presets)

Mixing with Presets

Voctomix2 - Presets

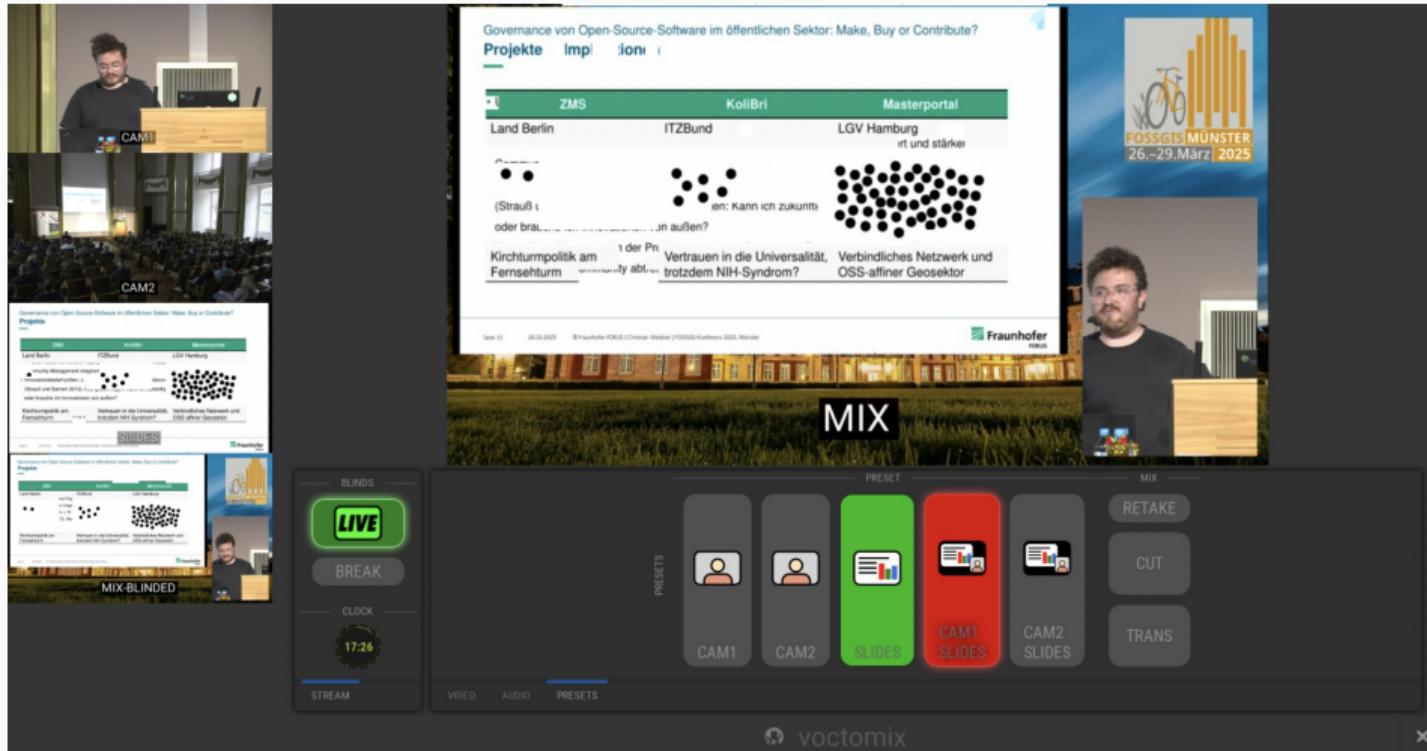


Figure 14: Voctomix2 Presets: Lecture Mode

Voctomix2 - Presets

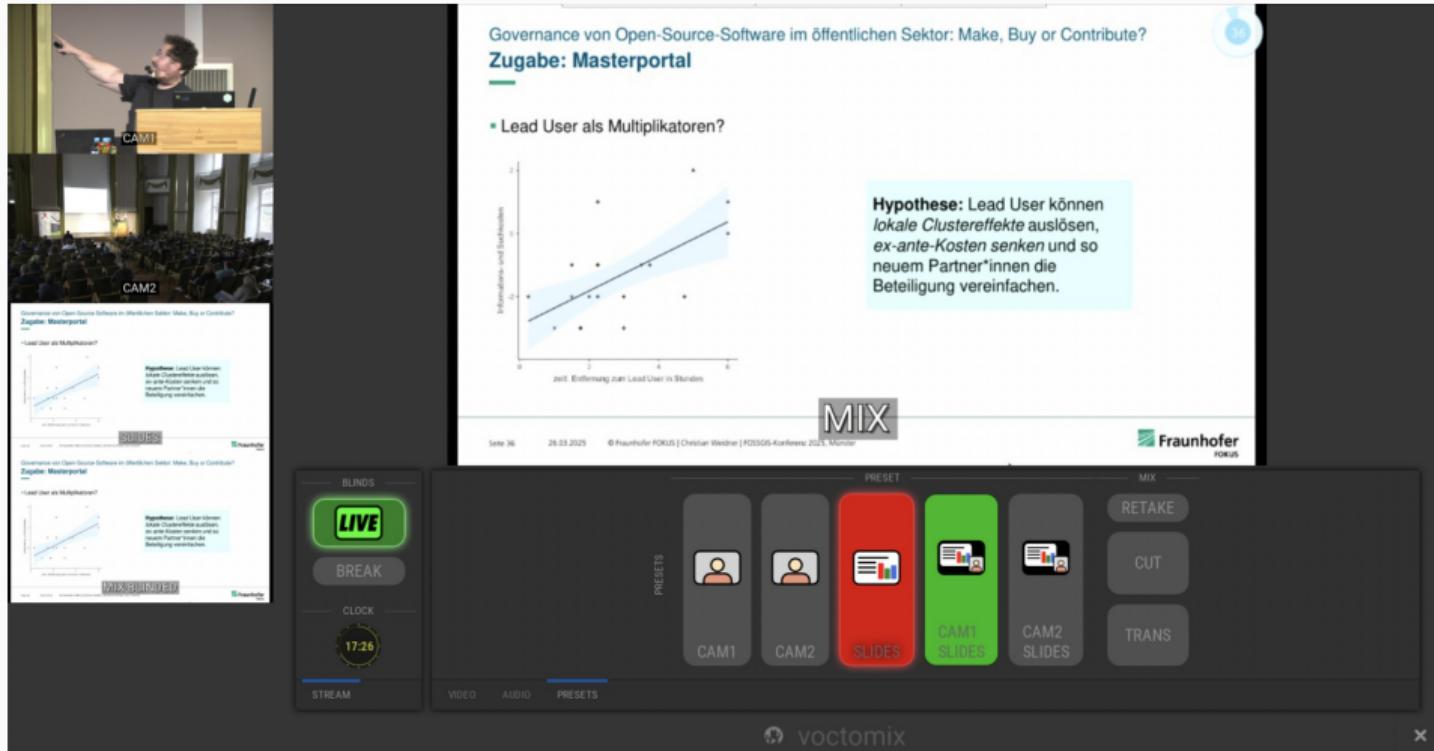


Figure 15: Voctomix2 Presets: Slides Fullscreen

Classical Mode

Voctomix2 - Pre-Select



Figure 16: Voctomix2 - Lecture Mode - Pre-Selected

Vocomix2 - Lecture Mode

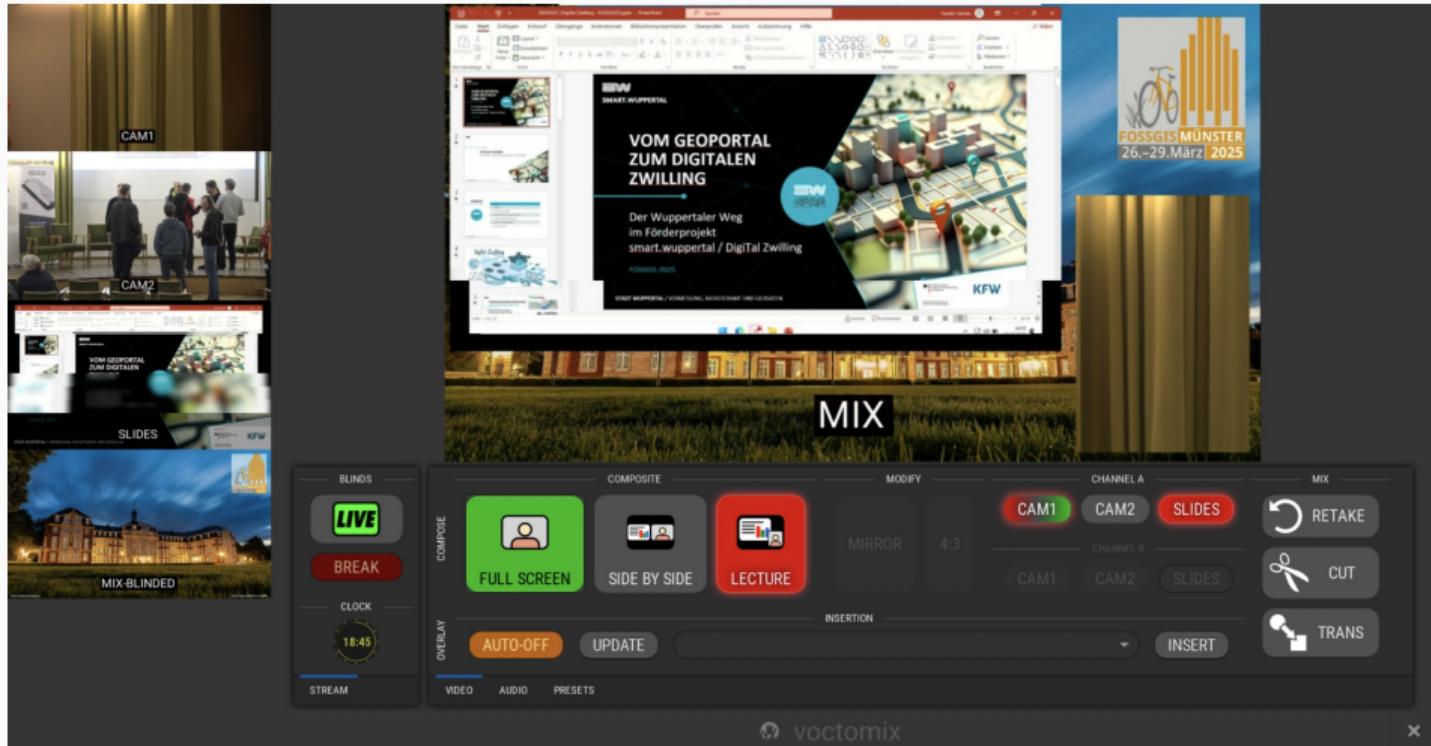


Figure 17: Vocomix2 - Lecture Mode - Live

Voctomix2 - Lecture Mode 4:3

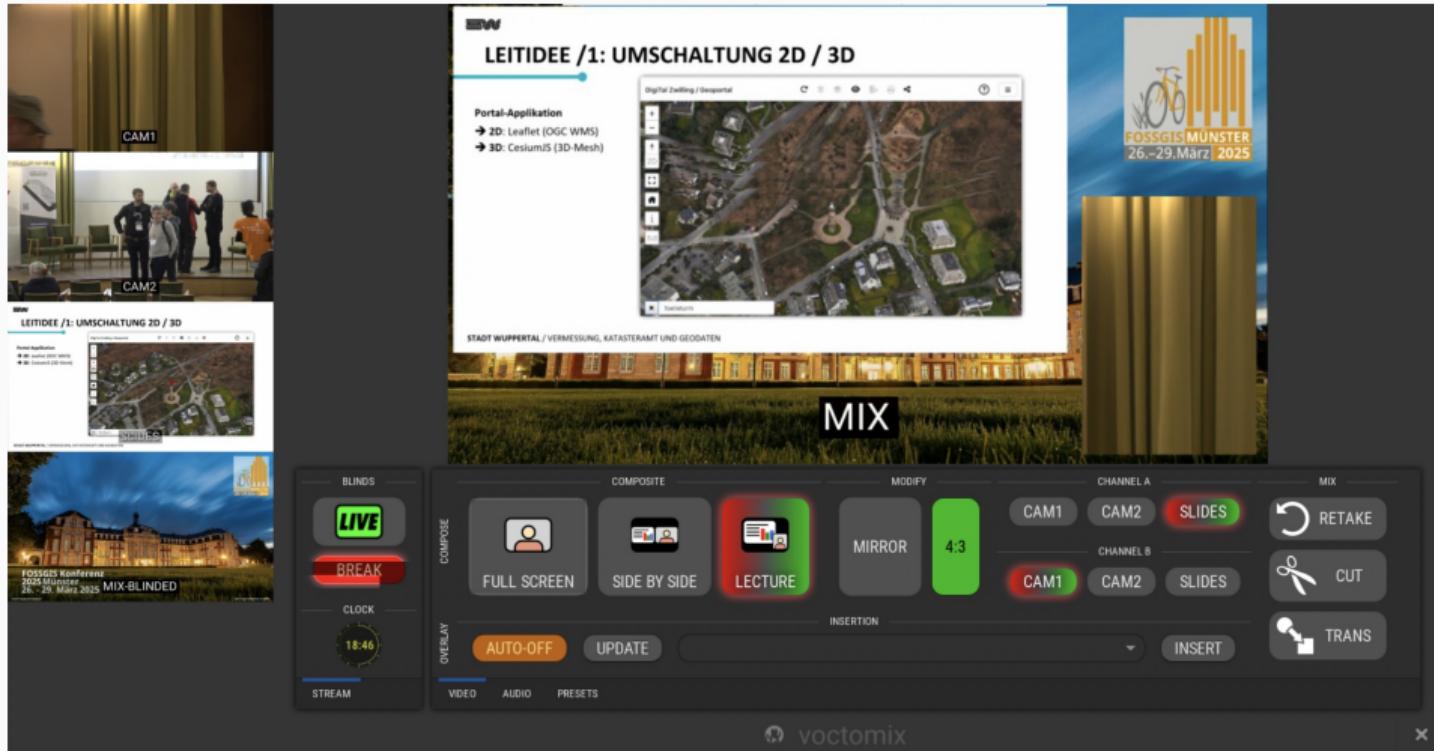


Figure 18: Voctomix2 - Lecture Mode 4:3 - Pre-Selected

Voctomix2 - Lecture Mode 4:3



Figure 19: Voctomix2 - Lecture Mode 4:3 - Live

Video Mixing Guidelines

Mixing Guidelines - Hard Rules

- All you are doing is **recorded** and will be published.
- The Audience is **not to be filmed**. Cut away if faces of people not on the stage appear.
- **Slides are important**
- Slides stay on till the text has been read **twice**.
- Show new slides **immediately**.

Mixing Guidelines - Softer Hints

- Start early – opening announcements of the Herald are a good start. Their introduction has to be in the recording and on stream.
- Open wide – Structure the beginning of a talk with shots that set the stage
- The slides in fullscreen – you're dealing with a very small screen. Text has to be readable
- Show gestures – medium-close-up that follows the speakers eye-line
- Don't be too cutty – Pace your videos temperately. Do not cut too often.
- Don't end too early – All questions and answers have to be recorded. The herald ends the talk, not the mixer angel.

Hints

Leave lots of room at the start and end of a talk. Cut away from the infobeamer before the Herald starts with announcements. Cut to the infobeamer only after the last applause has finished.

Audio Hardware

Audio Mixer Controls: Levels



- Mute unused microphones (bottom row)
- Adjust hall loudness with rightmost fader
- Adjust individual microphone level with fader or reduce "trim" knob when it's clipping
- Please keep microphones un-muted during applause

Figure 20: Touchmix Main Controls

Audio Mixer Controls: Second Page



Figure 21: Touchmix Second Page

- If mute buttons are yellow, go back to "Main Mix" page
- If anything else is shown, just press "Home" button

Audio Mixer Controls: Headphones



Figure 22: Touchmix Headphones

- Press "Phones" to adjust headphone loudness
- "Cue" on Camera/ Recoding mix must be selected
- Rotary knob can be used to adjust selected parameter (headphone level, channel level, etc.)

Audio Mixer Controls: Layers



Figure 23: Allen & Heath CQ18T Layers

- Please make sure, to always work on "Custom Workbench D"
- If anything else is shown, contact VOC or A/V-Technician before the talk

Audio Mixer Controls: Levels



Figure 24: Allen & Heath CQ18T Main Controls

- Mute unused microphones (bottom row)
- Adjust hall loudness with fader labeled "PA"
- Do not use the fader labeled "NEIN"
- Please keep microphones un-muted during applause

Microphones

- We prefer headset microphones over handheld for speakers
- Distance to mouth will be constant -> more consistent audio level
- Handheld microphones for heralds and Q&A
- Our transmitters also have a mute button (yellow light = muted)
- Please check battery level from time to time

Headset Placement



- Microphone shall be at the corner of the mouth
- Boom can slide back and forth
- If too far in front, there will be too much wind noise
- Distance to face: About 2 cm
- Bend boom carefully

Figure 25: Good headset microphone placement

Contacts and Action Items

Who to Contact?

- Generic Questions? Something is wrong in lecture hall?
 - Reach A/V Technician on duty
 - Call the C3VOC Helpdesk **DECT 1600**
- Do you want to talk to us? Come to the C3VOC Office

Final Notes

- Click "join" on the angel types you want to have
- Queue up to get approved
- Select shifts:
 - Fill talks with no angels first
 - Take breaks

New Hardware

- We have new cameras (Sony PXW-Z200)
- We have new audio mixers (A&H CQ-18T) and microphones (Shure SLX-D)
except from room Saal 8
- Lectern Module: Same ATEM Mini as before, but in a fixed casing
- In Hall 4 - we are testing auto-tracking of the speaker - please talk to your A/V
tech how to disable it in case of emergency.

Notes for Setup at FrOSCon 2025

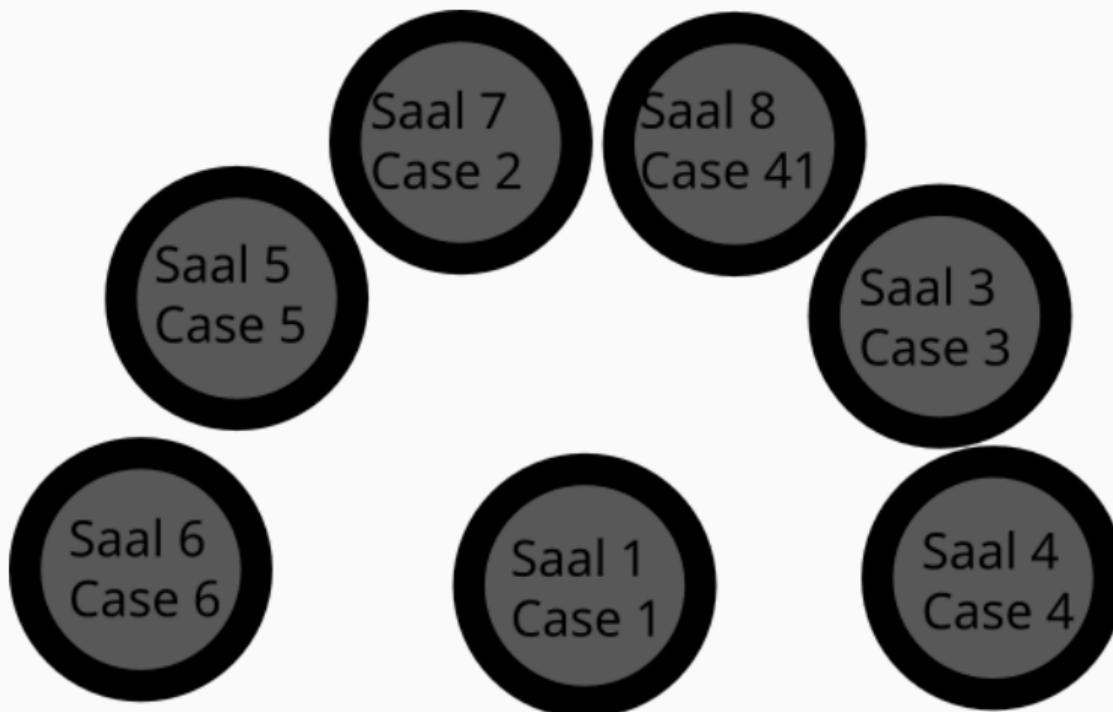


Figure 26: FrOSCon 2025 - Halls

Managing for happiness - trust based angel system

- We trust you. Trust-based angel system =)
- Call us @ 1600 if in need.
- Ask A/V tech if in need.

Angel Introduction: Questions?



Figure 27: <https://github.com/voc/engelschulung>