

eduMEET overview

CLAUDIO ALLOCCHIO - GARR



eduMEET

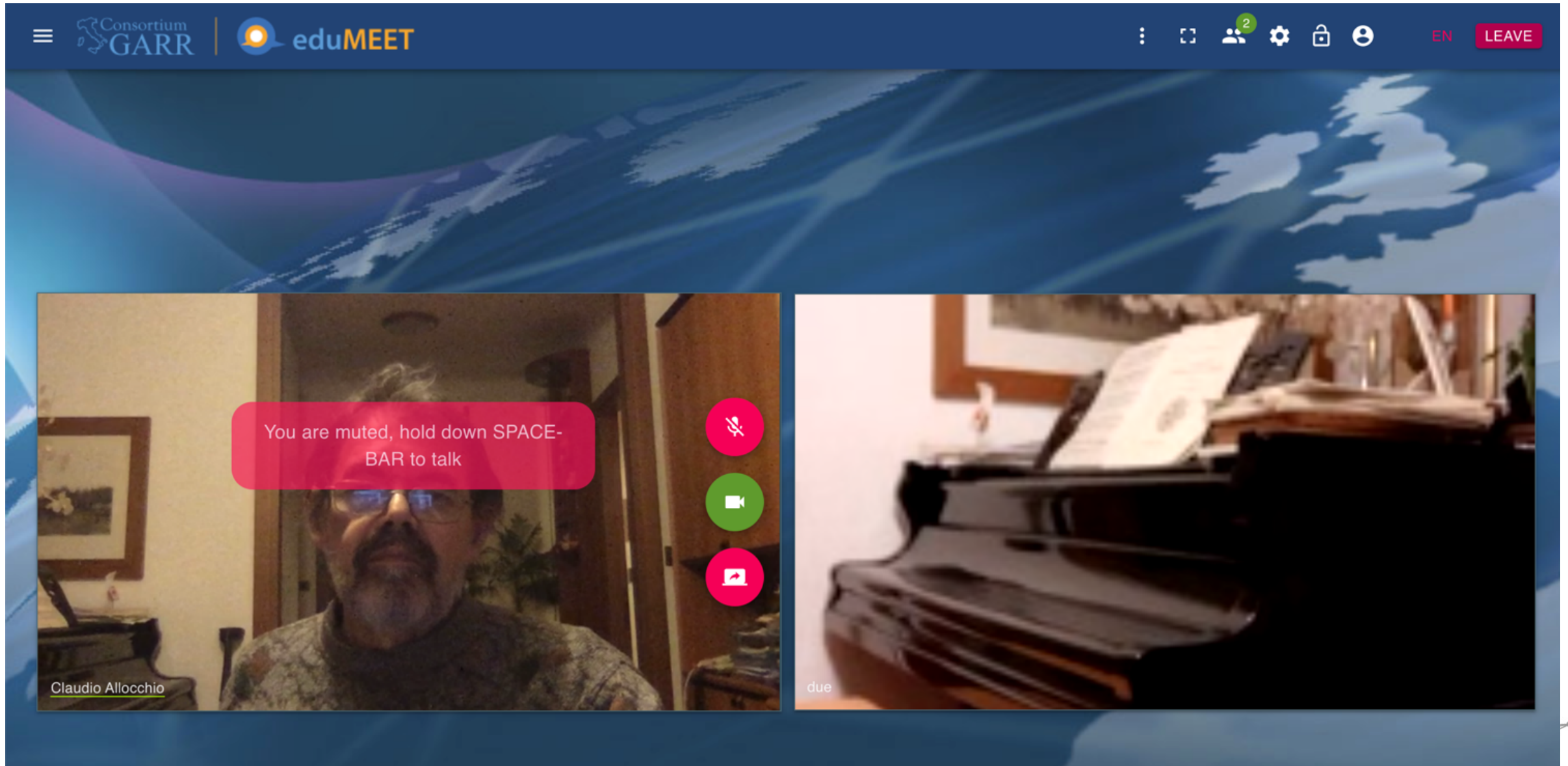
April 27th 2021

NPAPWS 2021

Generic overview of eduMEET technology

- eduMEET is an **open source project**, sustained by GÉANT Community via the GN4-3 project
- Based on **webRTC standard** (Single Forwarding Unit (SFU) on server)
- **No client to install** (just use any recent web browser – Chrome, Firefox, ...) on **most devices**
- The server software is **available for free**
- many server installations are **available to anybody for free**
- **No booking system**, rooms are created on the fly
- Depending on the resources of the device/network, usually **ok for ~30+ users per room**
- Chat, participant list, moderator control, screen/file sharing, room lock, lobby, ...
- Easy user interface
- **Upcoming features: webinar, background, recording, QoS, whiteboard,...**

How eduMEET looks like



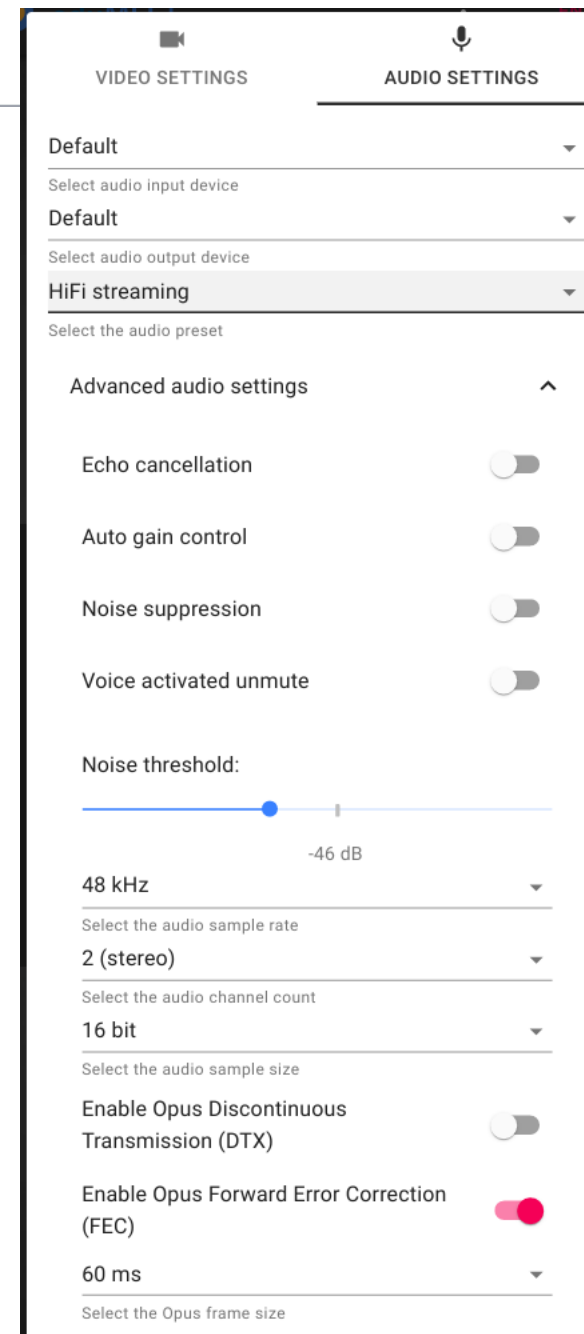
eduMEET equipment for Performing Arts

- A **recent** PC / Mac / tablet / smartphone with a good CPU and up to date operating system
- At least a **USB external microphone** with good audio spectrum response (may add delay)
- A **good headset** (or external loudspeakers)
- When possible, additional **external webcam(s)**
- For 2 participants at 1080p video, **at least 1.5Mbps** upload / download network connection
- When possible, connect the **device via cable** to your router (no WiFi!)



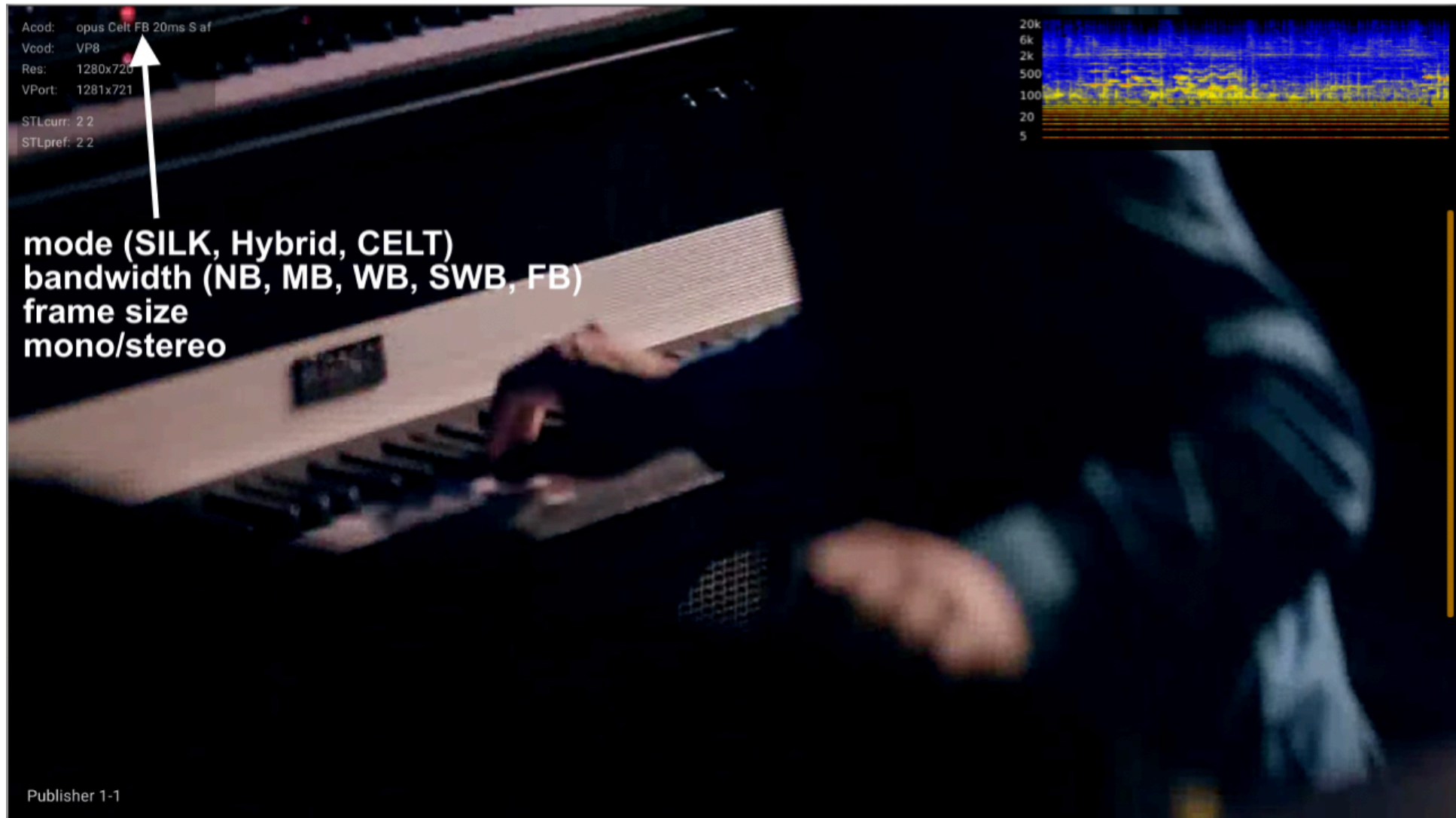
eduMEET features for Performing Arts

- Video resolution up to 4K (3840x2160)
- Supports multiple webcams
- Opus standard audio codec
 - Echo cancellation control
 - Noise suppression control
 - Auto gain control
 - Voice activated unmute
 - HiFi music mode profile:
 - 44 / 48 Khz,
 - Sampling bits control
 - 2 channels
 - Opus DTX
 - Opus forward error connection



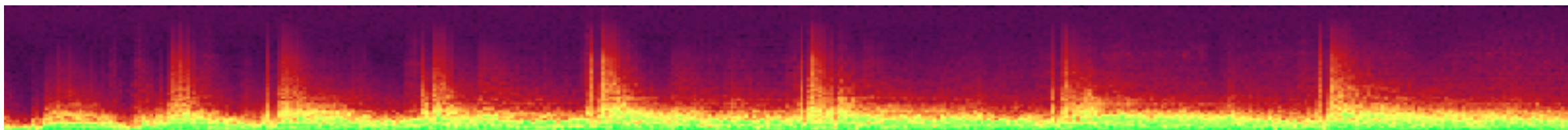
eduMEET features for Performing Arts

Live audio spectrum analyzer

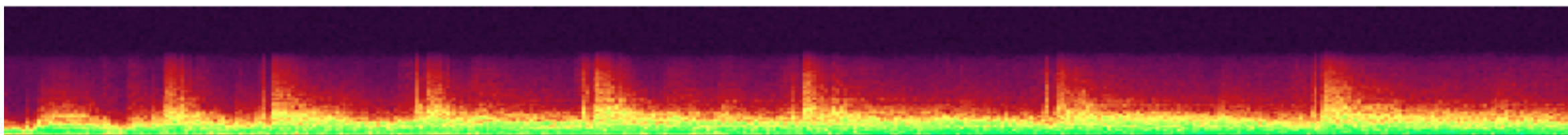


Audio Comparison Spectrograms

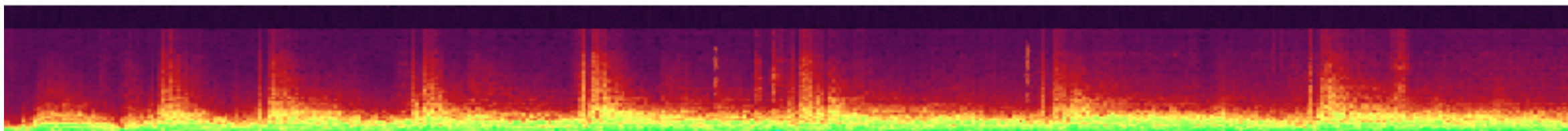
Original uncompressed audio



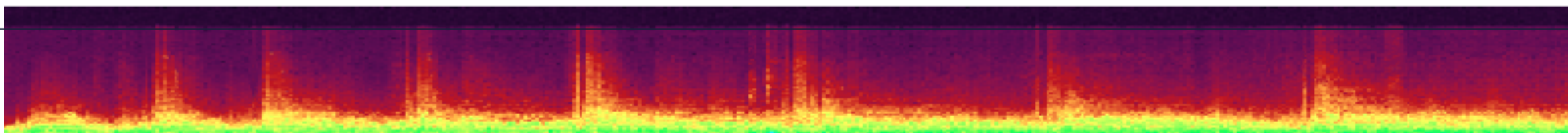
Zoom standard audio



Zoom «original sound» on



eduMEET (not yet HiFi mode) Opus audio



Scenarios for eduMEET use

- Teaching from / to home (or where poor network connections are the only option)
- Also when students just have a tablet or smartphone
- 1 to 1 lessons, but also small groups
- Use free public available services, but also «install your own» as institution
- Ensures privacy
- NOT possible to play together



Where to learn more about eduMEET and training

General information:

- <https://edumeeet.org>
- community@edumeeet.org
- <https://www.youtube.com/watch?v=fB-fAM0RZao>

Development / download:

- <https://github.com/edumeeet>

Some places to try it live (public servers)

- <https://edumeeet.geant.org> (demo)
- <https://edu.meet.garr.it> (production server)