



GIVE YOUR COMMUNICATION MEANING

Fully integrated video calling to generate value inside your business infrastructure

#TECHPAPER

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eyeson

The problem of business interactions

Communication happens outside of your processes



TECHNOLOGY OVERVIEW

BASIC TECHNOLOGY

MCU/SFU hybrid, WebRTC compliant

API

REST (restful service)/
websocket control interface

VIDEO CODECS

vp8/h264 video codec

AUDIO CODECS

Opus/aac audio codec

RTMP

RTMP(S) client (live-stream forwarding) &
RTMP server (video injection)

STREAMING

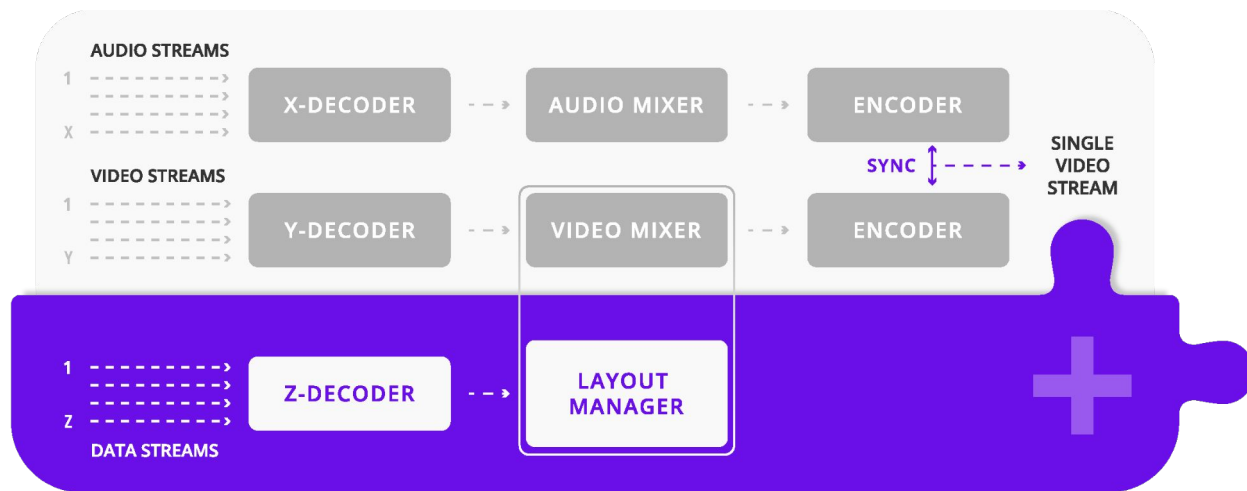
DASH/RTMP(S) live-streaming client

RECORDING

Direct webm-recording



ONE STREAM AS KEY to situational awareness



1

DECODING/CONVERTING

Incoming video streams from each client are decoded into a raw video format. Incoming data stream are converted into pictures or single frames.

2

MIXING/LAYOUT MANAGER

Video frames from incoming video stream & media conversions are mixed into a single frame. The layout manager can position each source separately.

3

ENCODING/STREAMING

The mixed stream is encoded in one video stream and send to all connected client, as well used for recording and live streaming services.

MCU+ transcodes video,
audio & data streams
into one single stream

TABLE OF FUNCTIONS

Only a **Multi Control Unit** (MCU) can integrate all functions, streams and data necessary.

FUNCTION	OTHER MCU	EYESON MCU+
Add/Remove participant	✓	✓
Hide/Show participants	✓	✓
Use screencasting/presentations	✓	✓
Enable broadcasting/streaming	✓	✓
Synchronized view ("all see the same")	✗	✓
Set custom video layout	✗	✓
Set custom positioning of participants	✗	✓
Cloud-based snapshots & recording	✗	✓
Set back-/foreground layer per video frame	✗	✓
Add live or playback video streams	✗	✓
Inject any data on custom positions	✗	✓

BANDWIDTH REQUIREMENTS

The connection for up- and downstream of each client **automatically adjusts to the real-time streaming capabilities** of the network the client is located in.

UPSTREAM

- 40 kbps audio-only
- 900 kbps with video
- 1500 kbps with presentation/screen-casting

**Upstream maximum
(adaptive)**

DOWNSTREAM

- 1280x960 @ 1500 kbps @ 25fps
- 640x480 @ 800 kbps @ 25fps
- 320x240 @ 400 kbps @ 25fps

**Regardless of the number of
participants (up to 100)**

NO EXPENSIVE DEVICES NEEDED

The server sends a single stream, which allows access to video conferences even through **low-performance devices**.



BROWSER-BASED

Supports by all major browsers on all devices



BACKWARDS COMPATIBILITY

Chrome 70+, Firefox 78+,
Edge 79+, Safari 11+



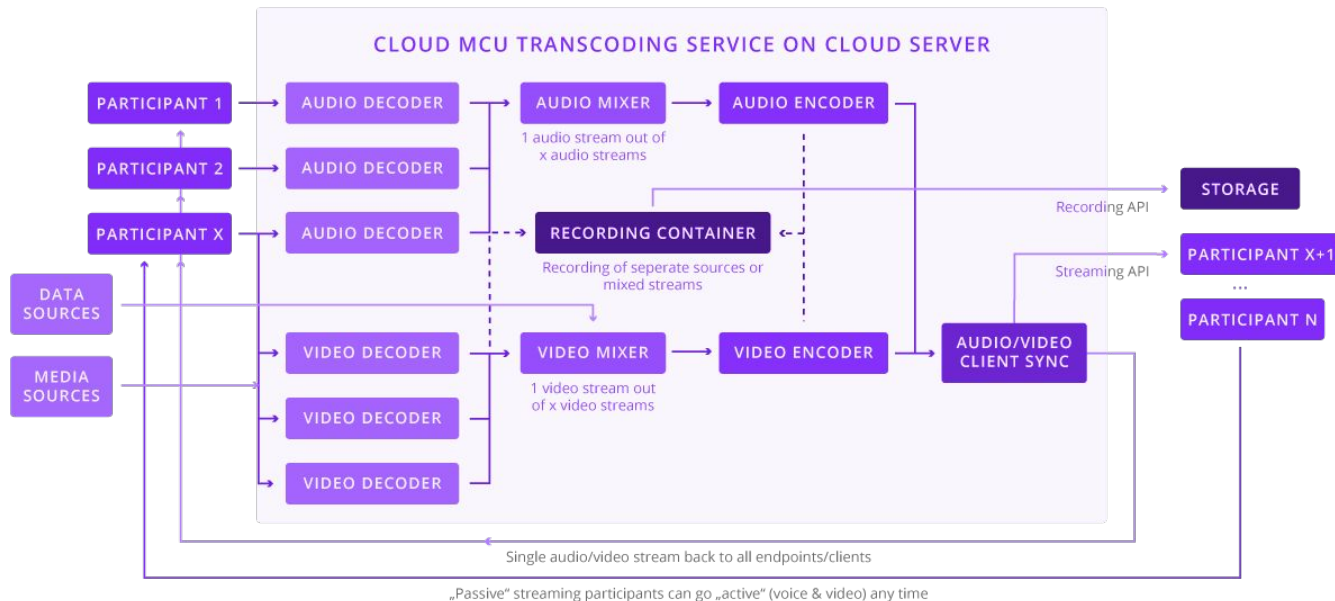
WEBRTC BASED

Open web standards
fully supported

- Low constant bandwidth needed from clients
- Bitrate does not depend on the number of participants, nor on the amount of data sent and received
- The client is directly connected to the conference server, not to the other participants. Server-side recording is available
- Devices using H323/SIP protocols can participate in conferences
- Maximum compatibility ensured by using standards supported by a maximum number of devices
- No expensive server is required to mix multiple media streams into one because eyeson takes care of it
- Up to 100 participants in one meeting plus recording and live streaming

Each cloud instance is controlling a wide range of functions for group video conferencing and data processing such as video and audio transcoding, mixing, streaming, recording, data & media injections and some more. Clients are streaming audio & video from a web browser to the cloud

instance, where all incoming streams are decoded. The decoded audio & video streams are mixed into one single video stream, which is used to send back to the clients, to store as a recording or to stream to broadcasting services.



Nintendo quit screen message

**Everything not saved
Will be lost.**



CLOUD AGNOSTIC

Choose Your
Configuration

We work with different
cloud providers to
guarantee compliance
and best performance &
scalability.



100% Cloud-based

Excellent call & video quality
your customers will love



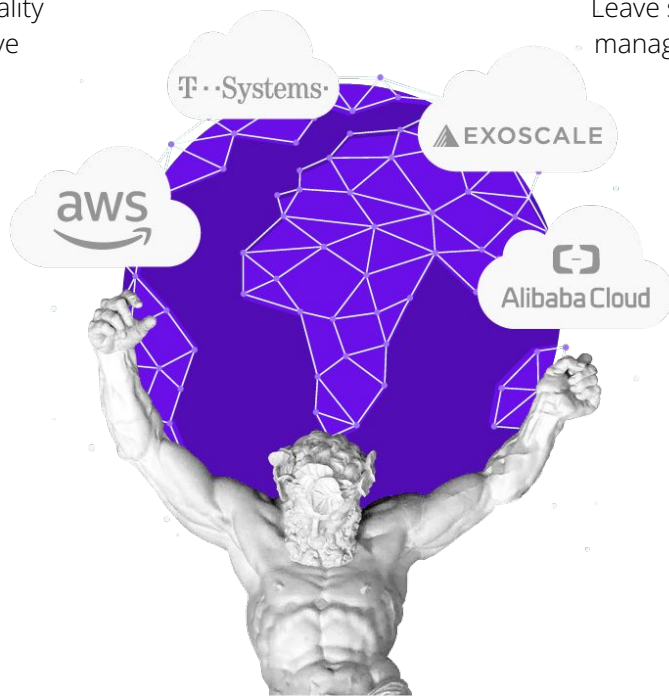
Fully Cloud Agnostic

Stay compliant and work with
any public or private cloud



Managed Scalability

Leave scaling and resource
management to the cloud



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