

SONY

Introducing the Edge Analytics Appliance

Enrich your visual communications

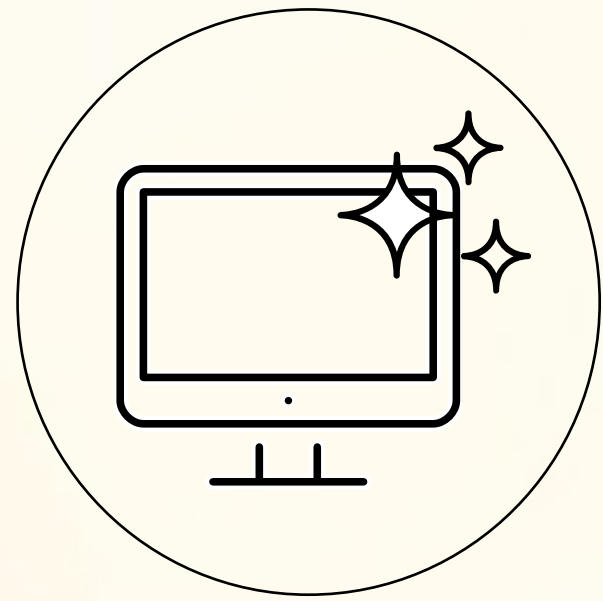


Sony Imaging Products & Solutions Inc.

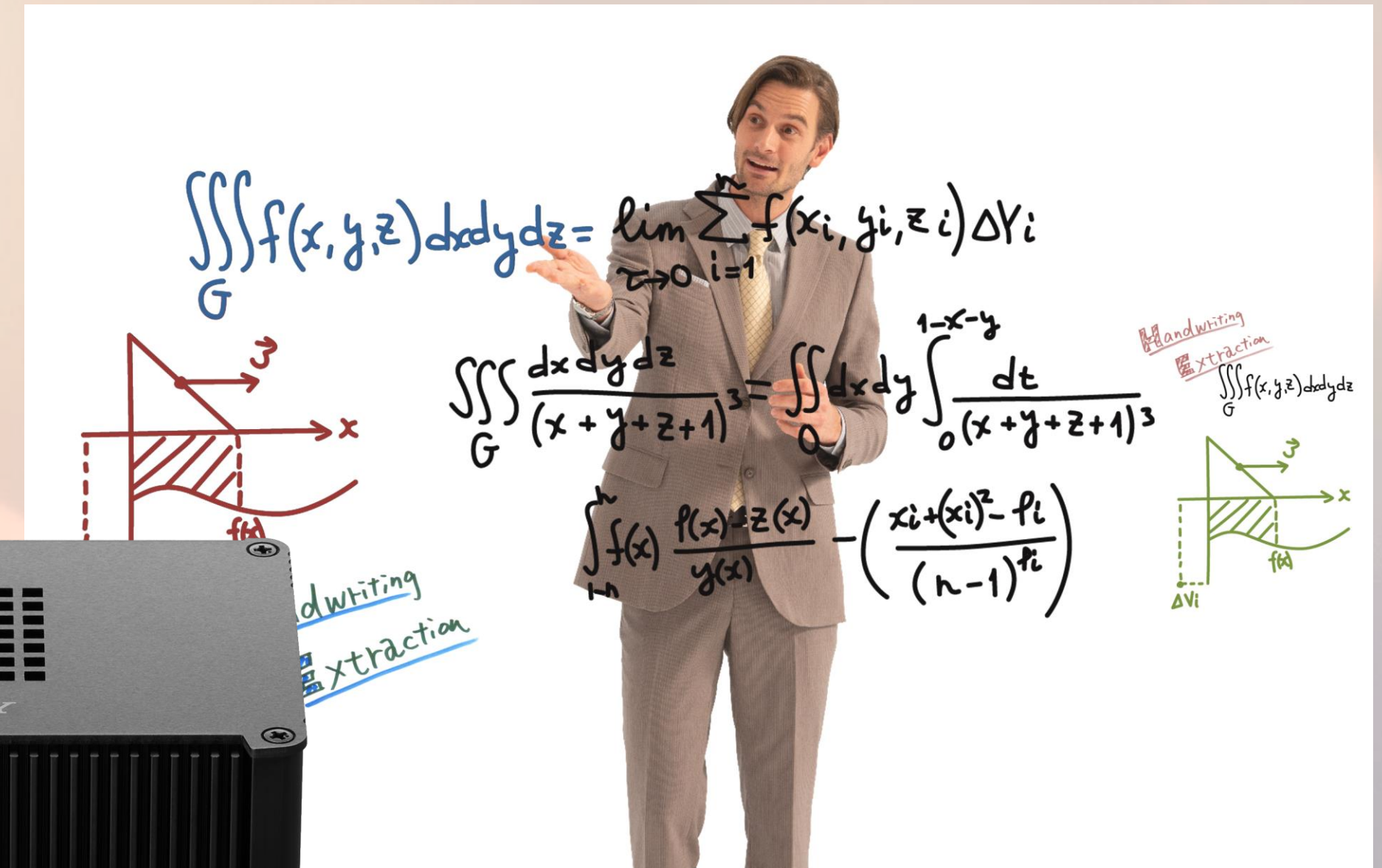
What is the Edge Analytics Appliance?

Grab your audience's attention, increase their engagement.

The **Edge Analytics Appliance** improves the quality of presentations and communication with the use of **AI-driven GPU video analytics technologies**.

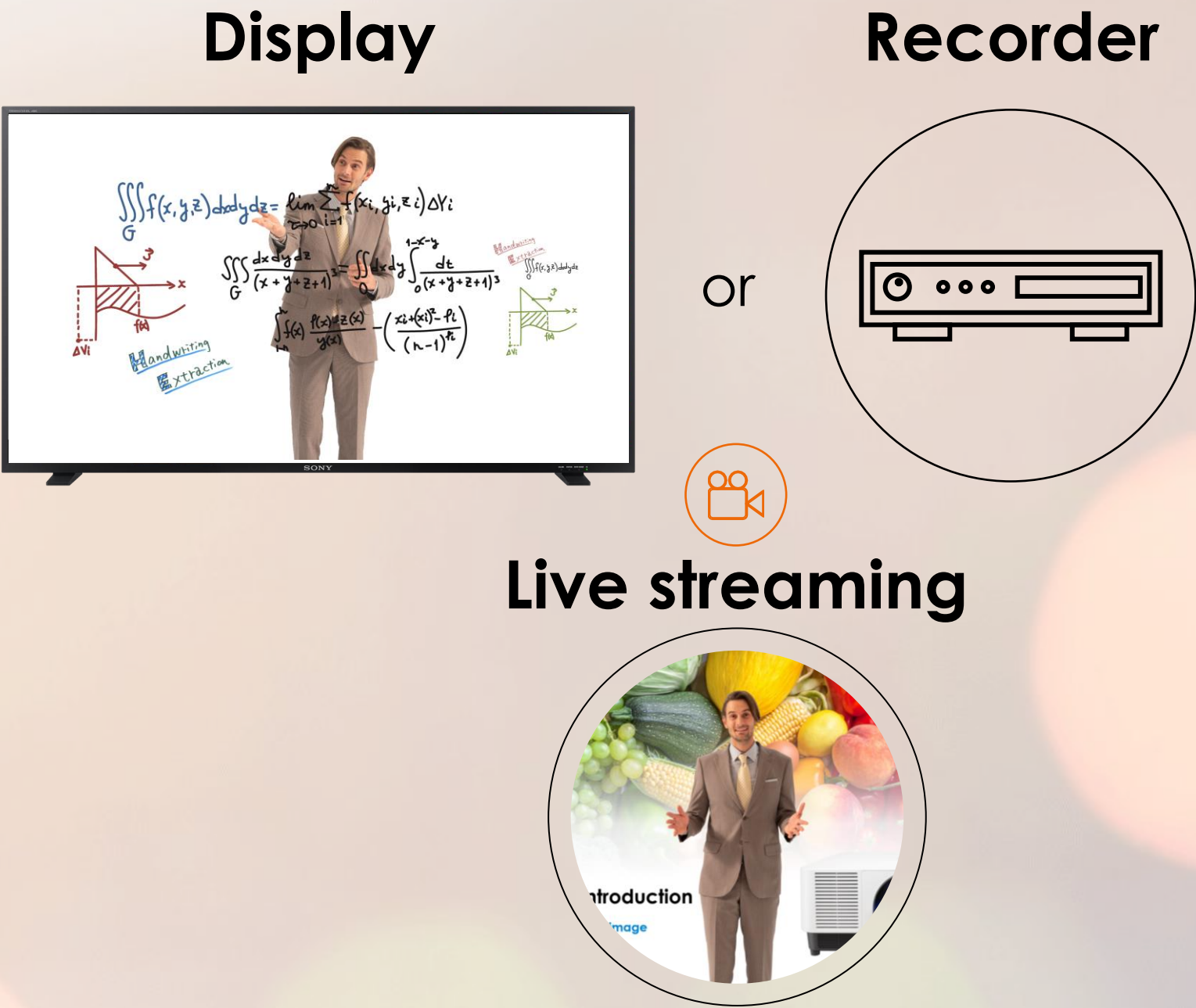
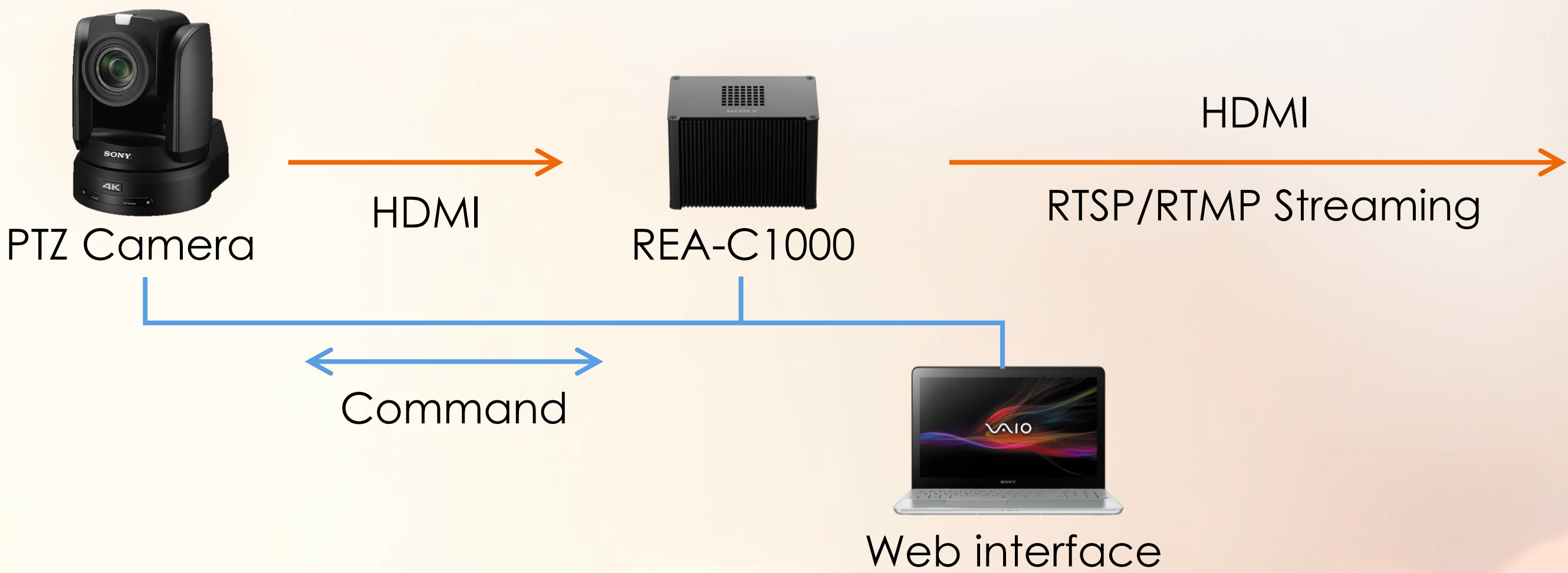


Automatically generates attractive video contents **in real time, hassle-free** – previously requiring significant time and human resources, and expensive to create.



Specification overview

System structure



Specification REA-C1000: Edge Analytics Appliance (Main Unit)

- Web user interface
- GPU (Deep Learning Capability)
- HDMI In x2
- HDMI Out x2
- Ethernet
- DC in
- IP Streaming out (H.264 RTSP/RTMP/RTMPS)
- Height: 97mm, Width: 141mm, Depth: 91mm / Approx. 0.86kg

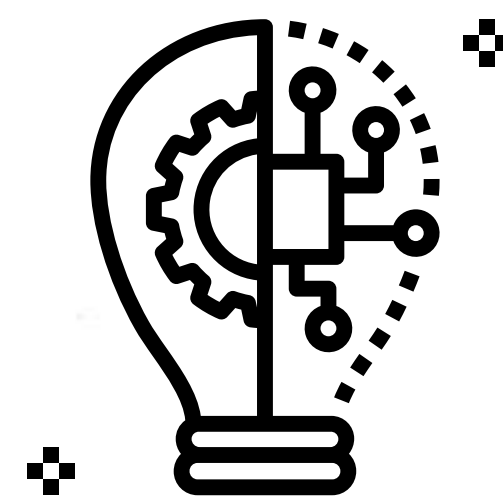
Option License

- REA-L0100: Handwriting Extraction
- REA-L0200: PTZ Auto Tracking
- REA-L0300: Close-up by Gesture
- REA-L0400: Chroma key-less CG overlay
- REA-L0500: Focus Area Cropping

Application

It's important for speakers' thoughts and ideas to be communicated to an audience in a way that conveys their passion. The situations below are key examples of where this applies.



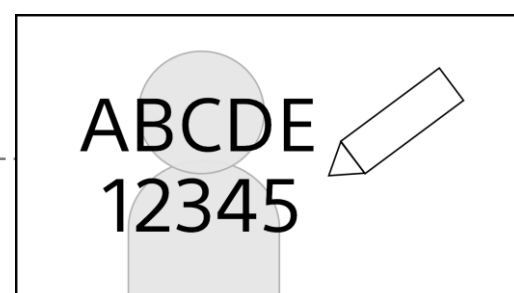


Solutions of Edge Analytics



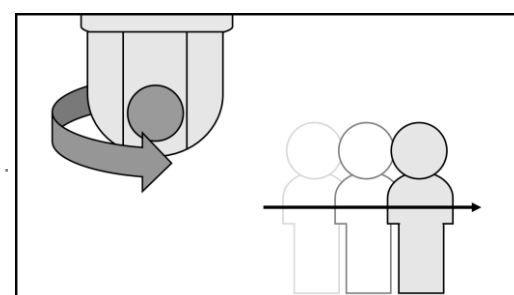
Edge Analytics Appliance (main unit)

REA-C1000



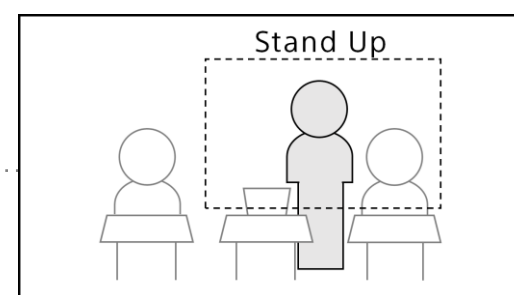
Handwriting Extraction

REA-L0100



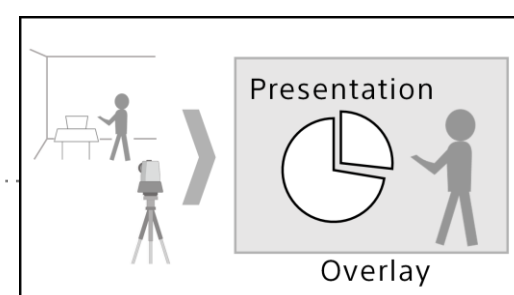
PTZ Auto Tracking

REA-L0200



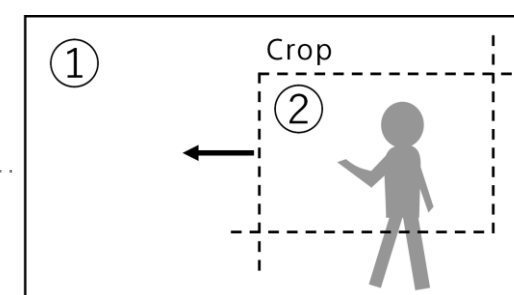
Close-up by Gesture

REA-L0300



Chroma key-less CG Overlay

REA-L0400



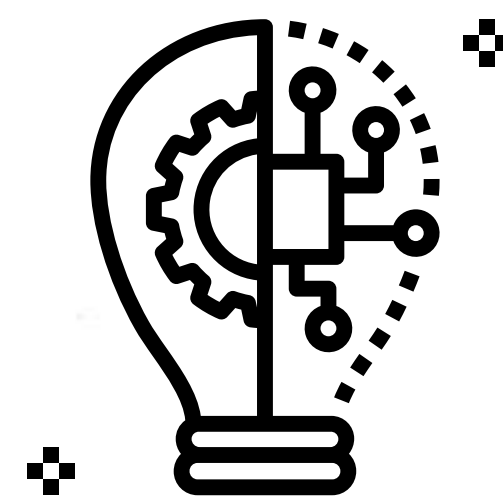
Focus Area Cropping

REA-L0500

*All optional features are pre-installed to use during a **60-day** free trial.

SONY

You can communicate, more than imagined.



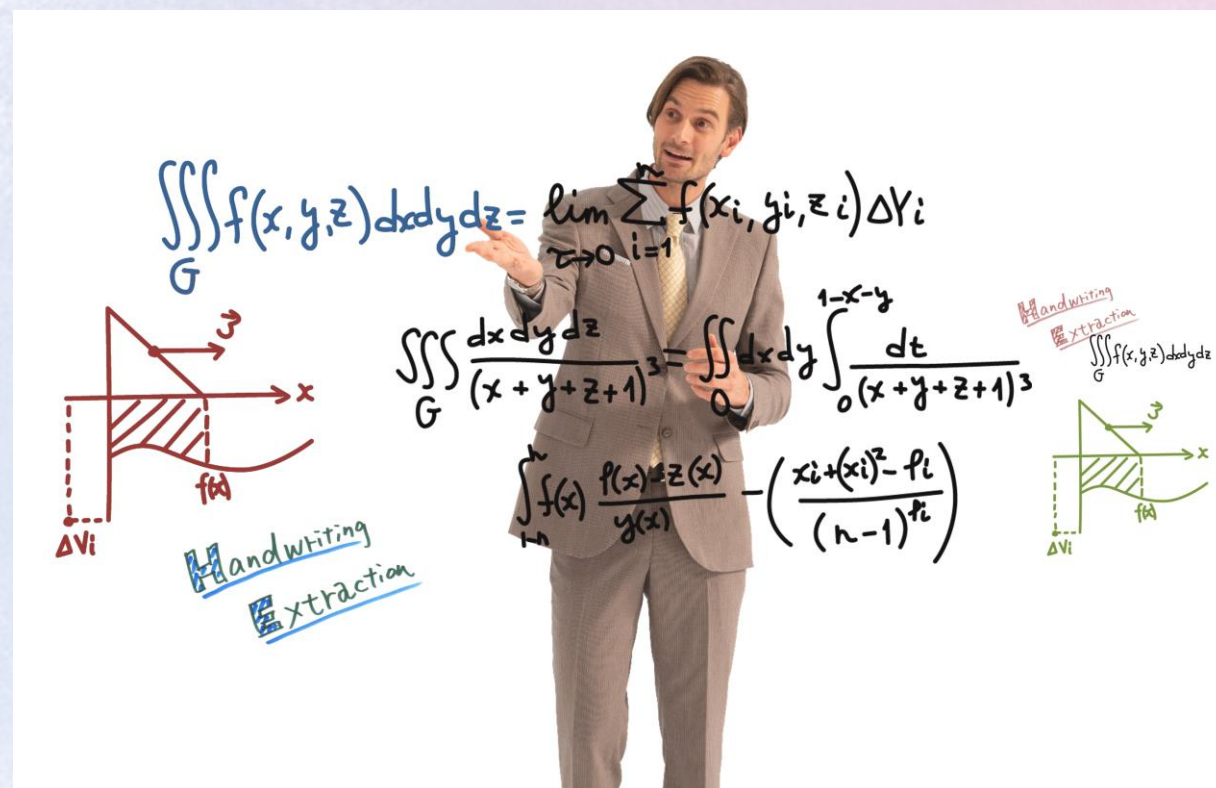
Handwriting Extraction

REA-L0100

Handwriting Extraction

Handwriting Extraction opens up new possibilities by offering attractive AR (Augmented Reality).

Ideal for



Lecture Capture
Content (review prior
to the actual class)



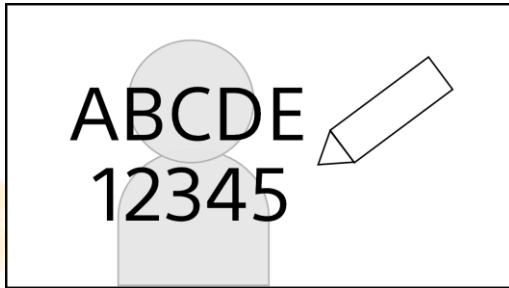
E-learning/MOOCs



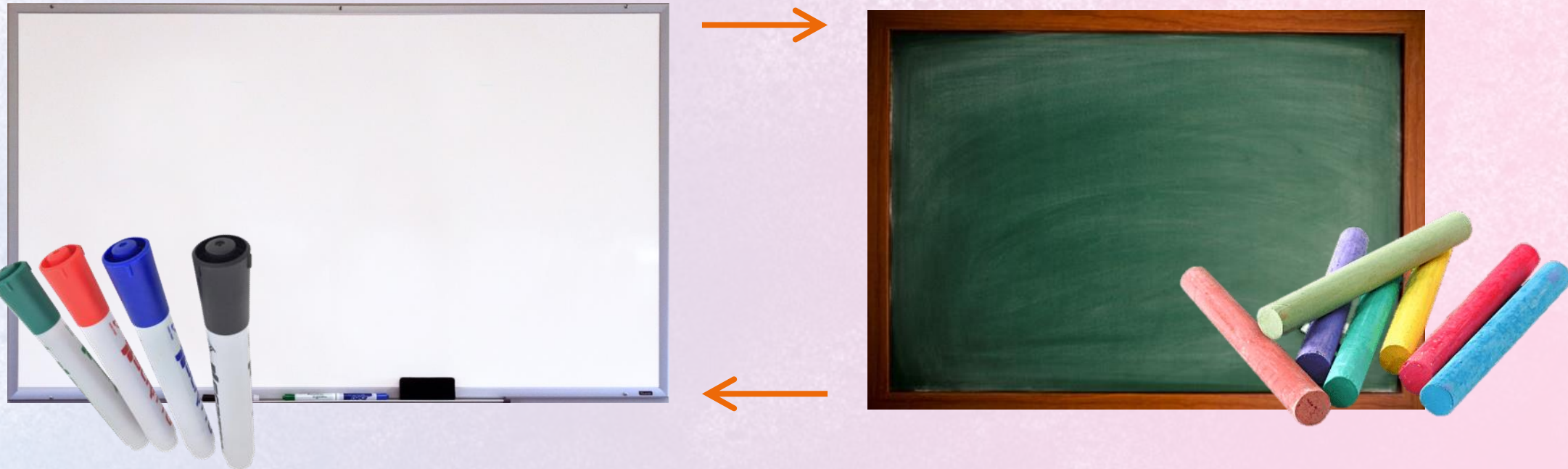
Live viewing via
ceiling monitor

Extract characters and diagrams written by a speaker on a board in real time and display them in front of the speaker like a floating board. It helps record speaker's ideas, thinking process, and passion on video, and transmit them to a audience.

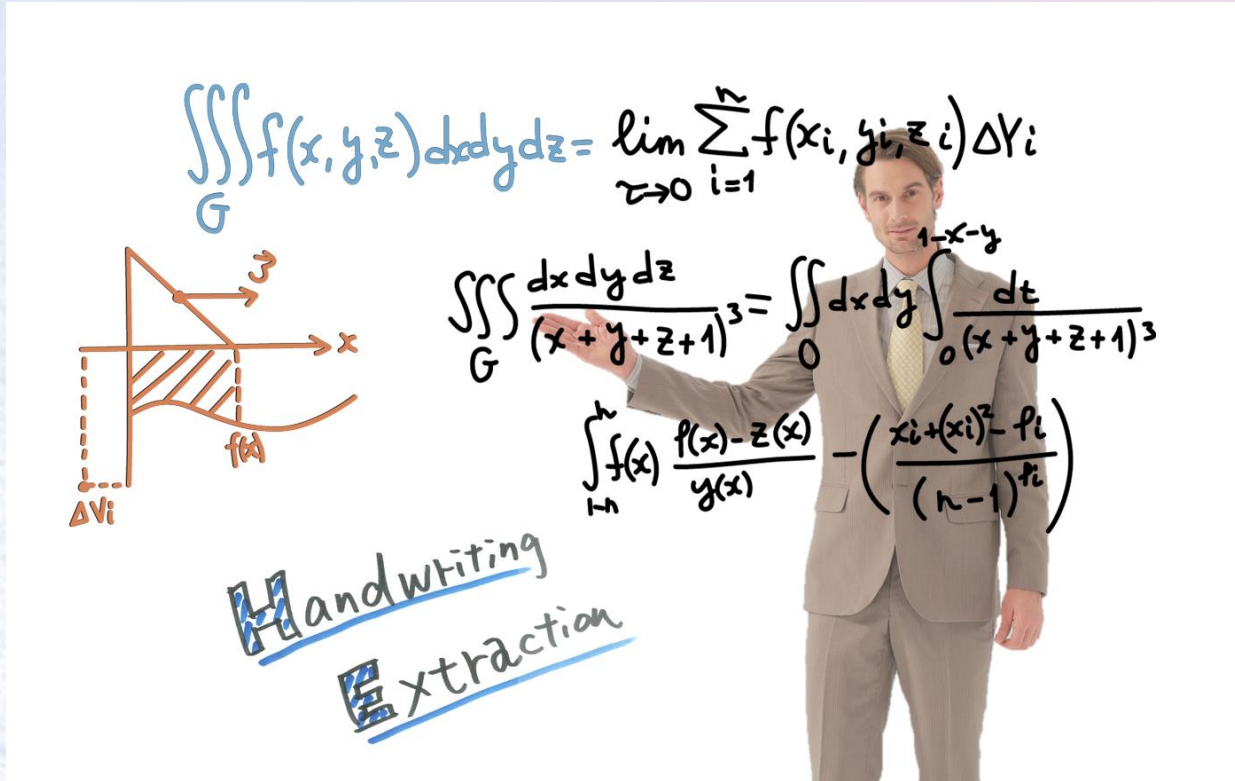
Competitive advantages for Handwriting Extraction 1/2



Supported board type



Beyond actual image



Enhance the color of extracted characters for easy-to-see board writing that's even clearer than the original.

Supported Professional Cam



BRC series



XD CAM



SRG series



Other vendors

Quality



Robustness

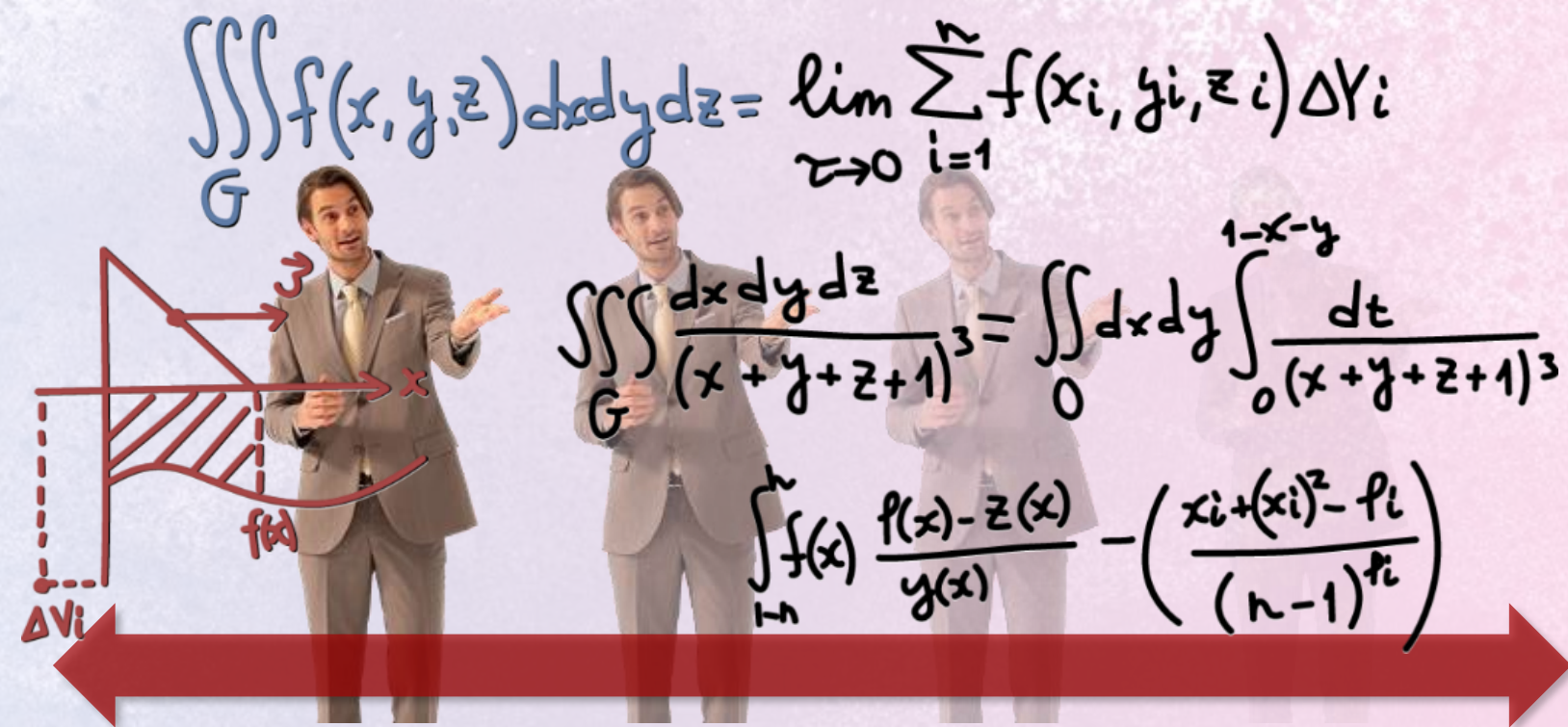


Even small fonts can be clearly extracted and rendered using a Sony high quality camera. SRG or BRC cameras, in particular, can optimize camera parameters in accordance with environment changes, via VISXA communication.

When the overlap mode is set to [Show Person], we recommend a Sony 4K Cam to achieve high-level presence (skin tone/facial expression etc.)

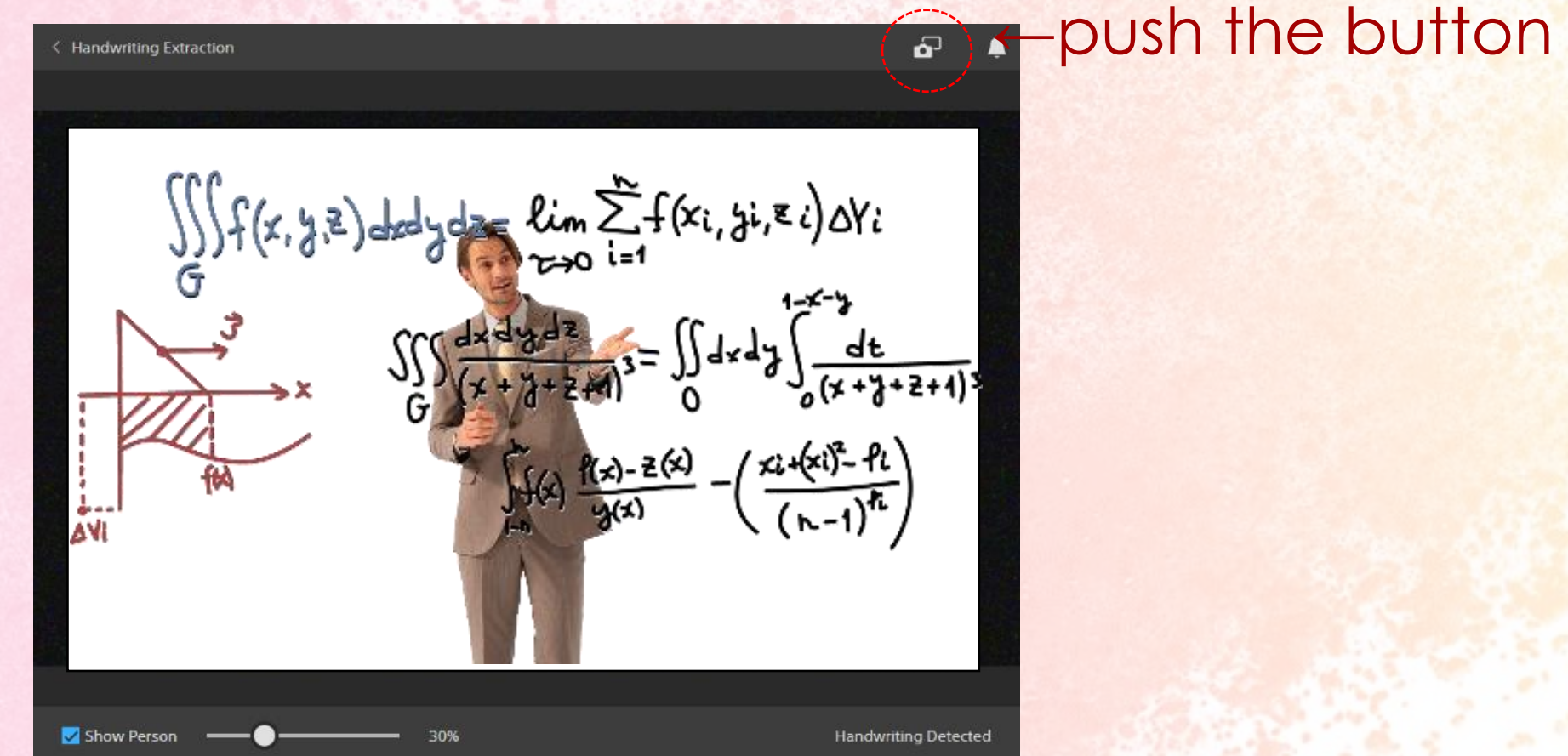
Competitive advantages for Handwriting Extraction 2/2

Adjust transparency ratio

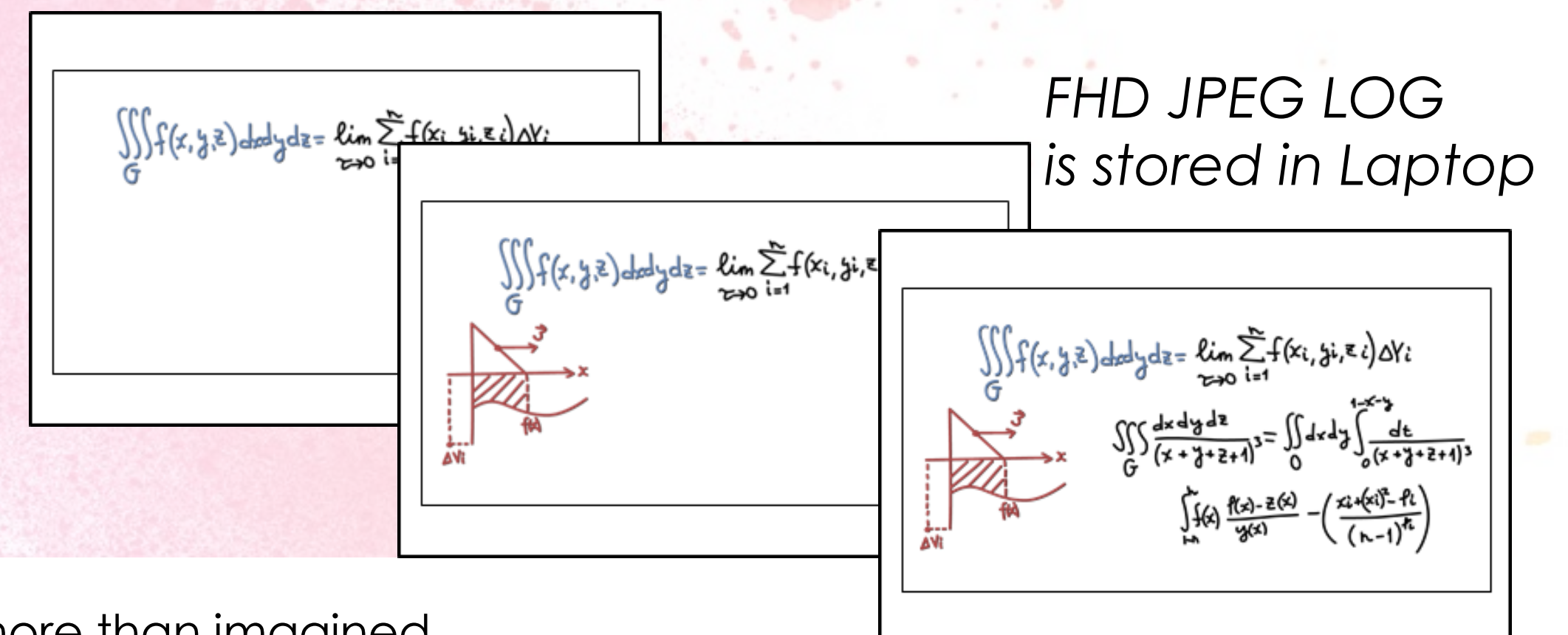


A customer can adjust transparency ratio even during operation.

Snapshot log function

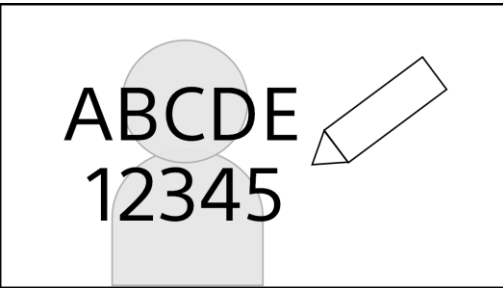


Download a JPEG file by using "Snapshot button" on user interface. And also you can generate LOG JPEG by API Command from your Integrated System.

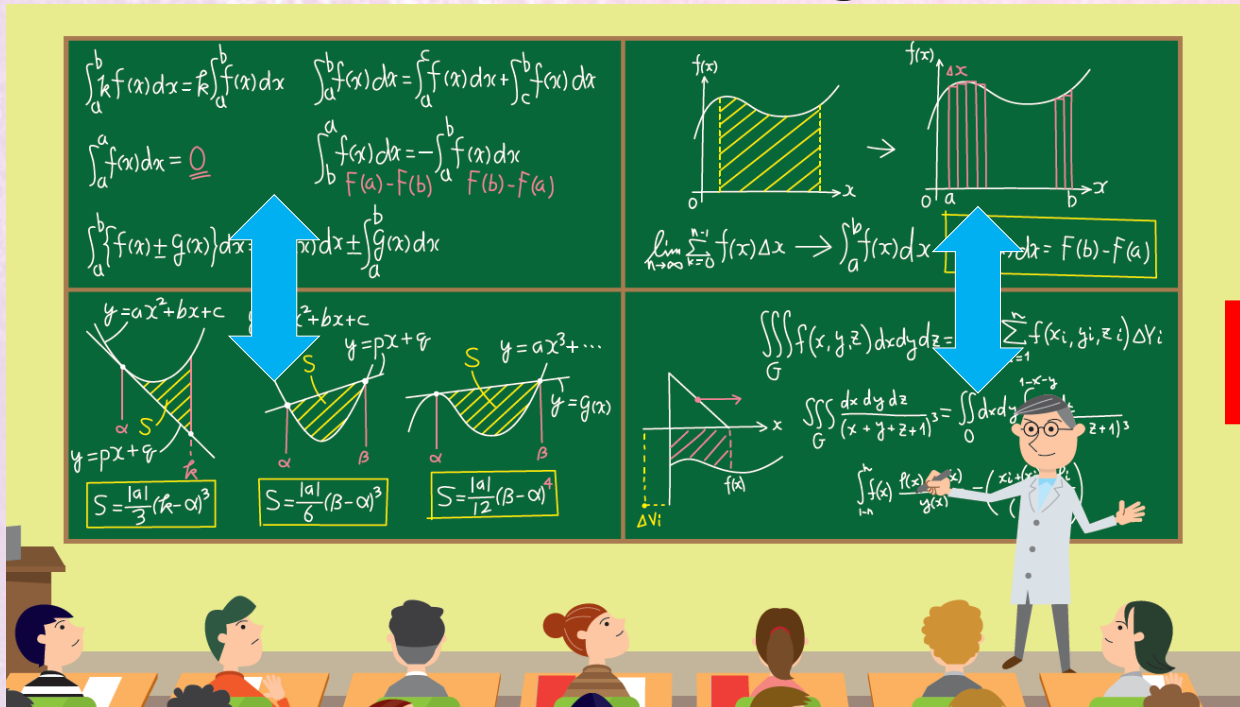


Handwriting Extraction supports **Multiple** board extraction

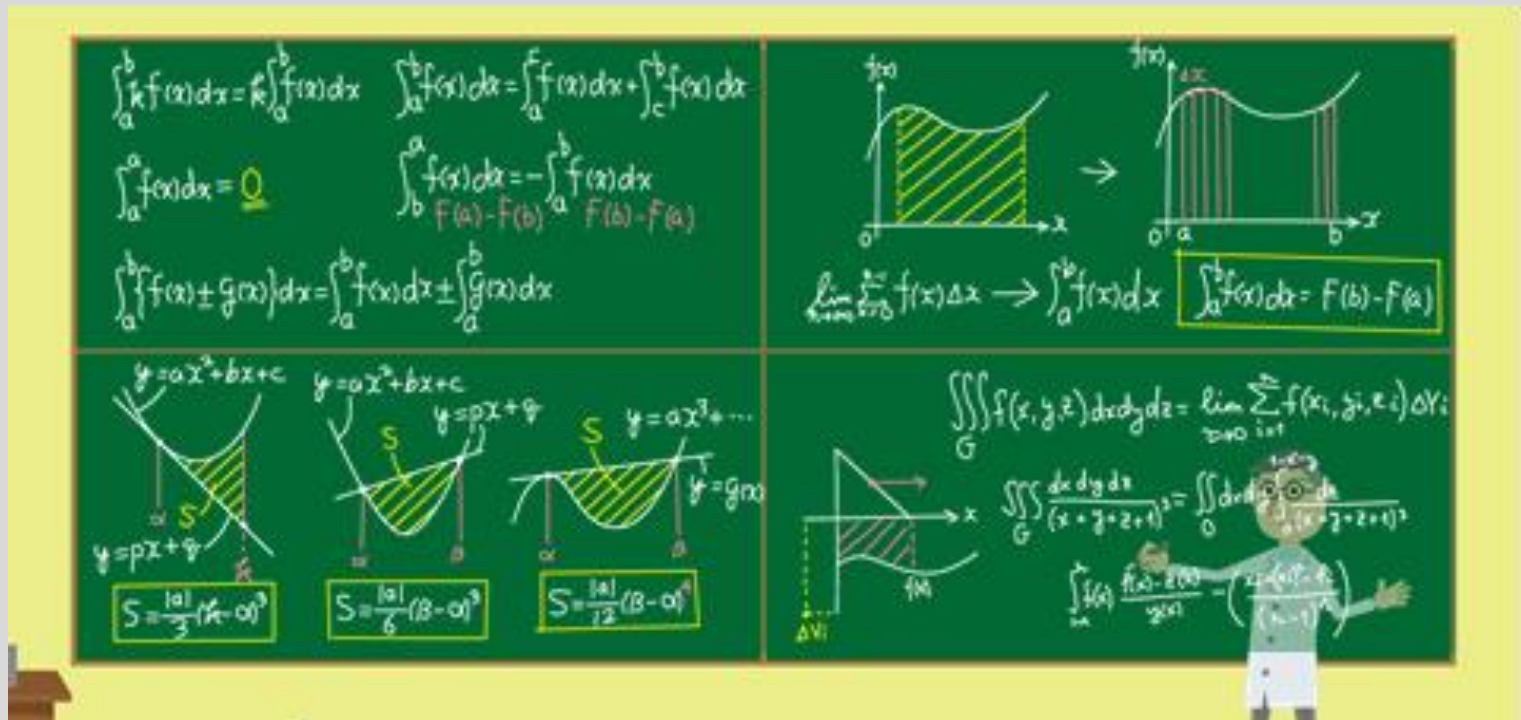
Extraction from multiple boards, Variable View mode are supported



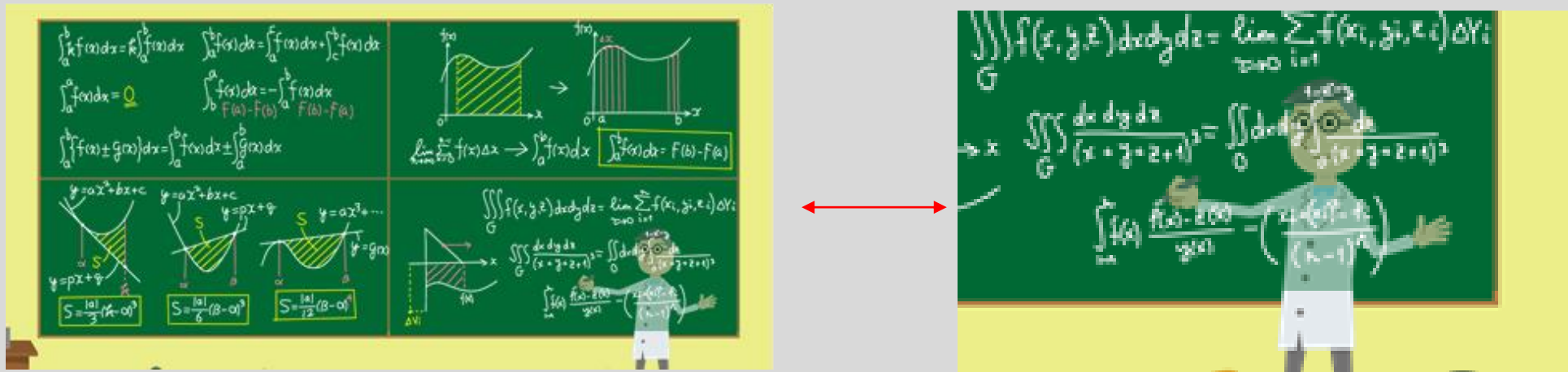
Input Video Angle



①Full View mode(wide zoom)



②Variable View mode(Whole \leftrightarrow cropped zoom)



Output Image Angle is changing occasionally when speaker's face is recognized..

Handwriting Extraction
Variable View mode for multiple boards



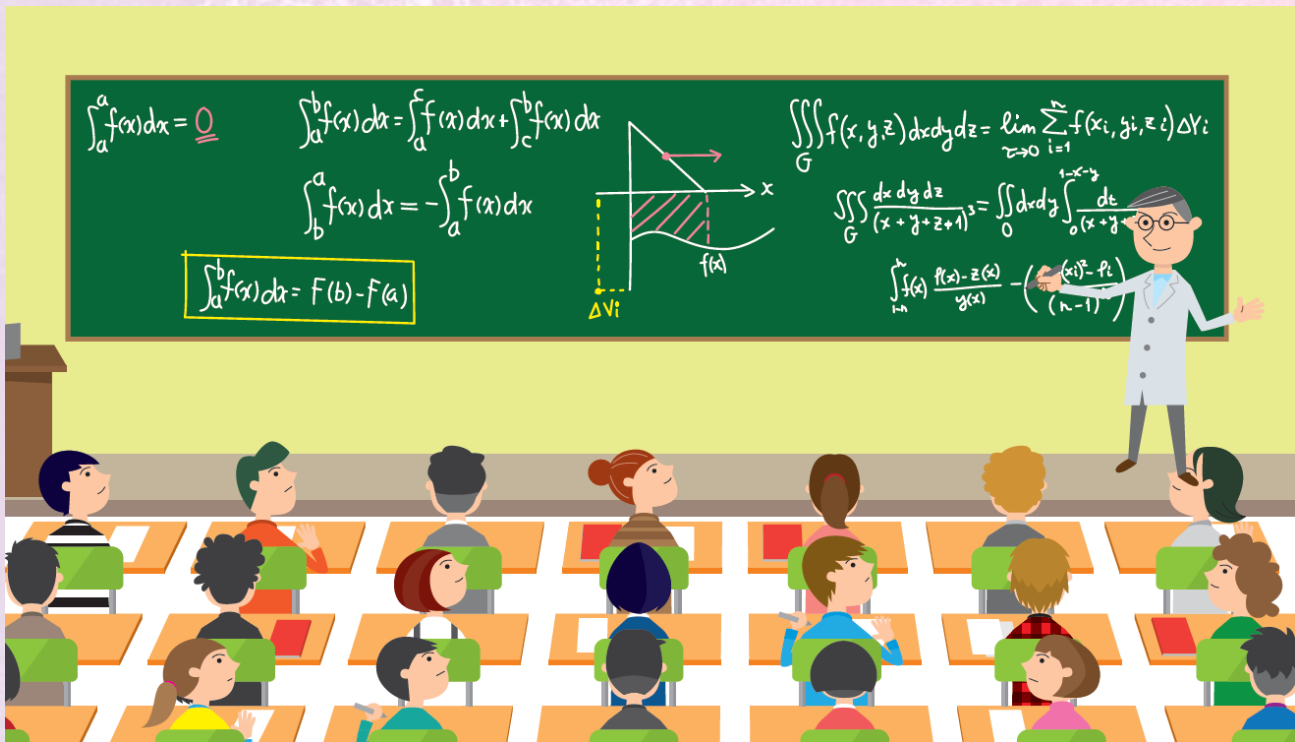
You can communicate, more than imagined.

NOTICE : Due to CPU performance capability. You can't use ②variable view mode when you use 2 functions continuously on same unit.

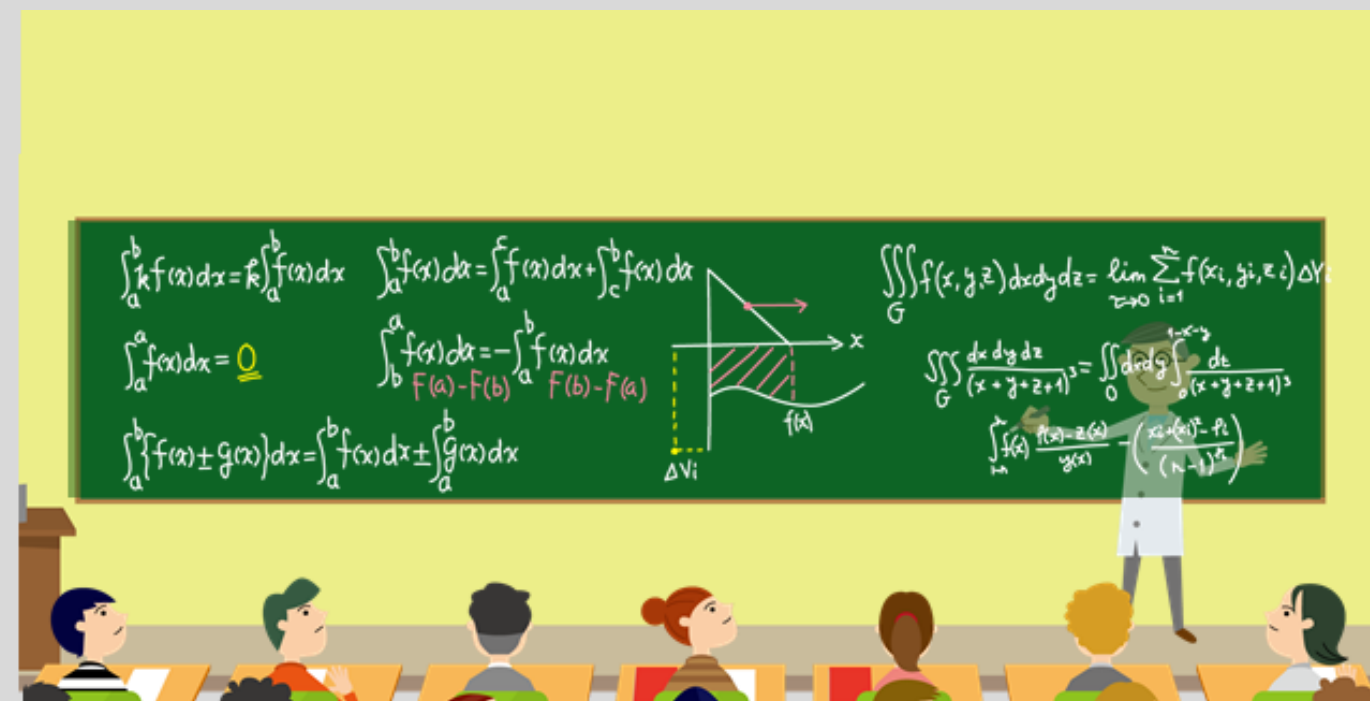
Handwriting Extraction supports **Wide** board extraction

Extraction from a long board, zoom display of the image around the teacher.
By automatically switching to the optimal frame, you can check the optimal area on the zoom image.

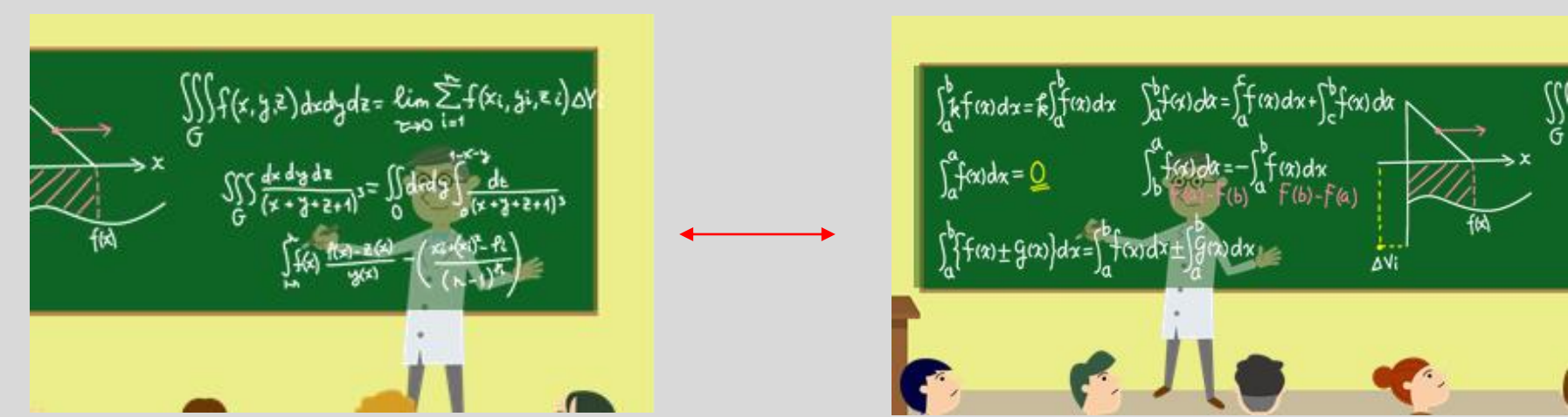
Input Video Angle



① Full View mode (wide zoom)



② Cropped View mode (switching mode)



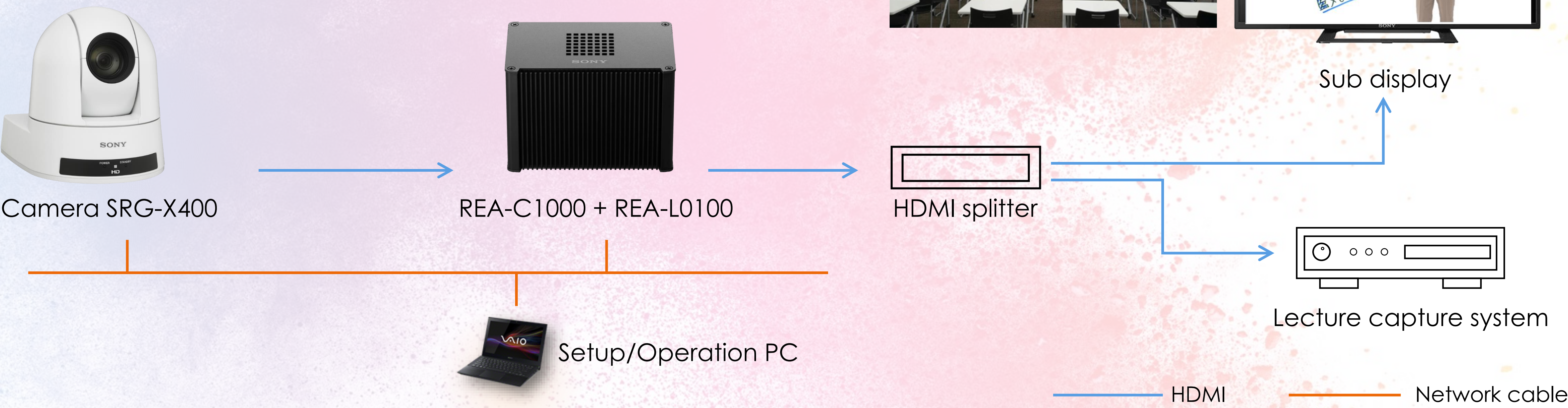
Output Image Angle react differently depending on moving area.

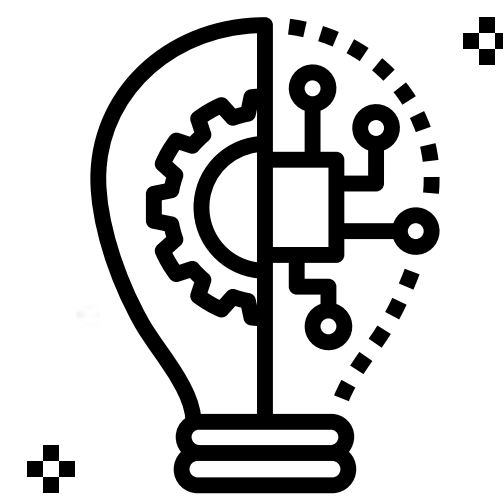
System Example

Handwriting Extraction for large-sized classrooms

User benefit

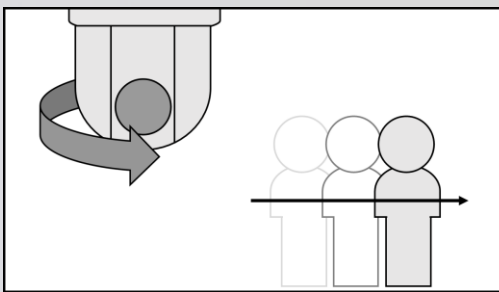
The system extracts characters and diagrams written on a white/black board, and displays them in real time in front of the teacher like a floating board. Keeping the visibility of board and speaker's motion helps to transmit his/her ideas, thinking process, and passion to the audience, including those sitting at the back of the room or in a class following remotely. (Operator-free, self-operation system)





PTZ Auto Tracking

REA-L0200

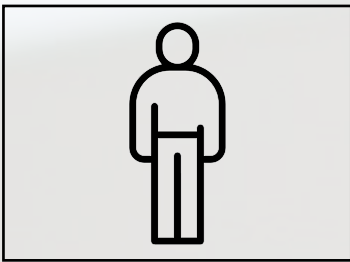


PTZ Auto Tracking

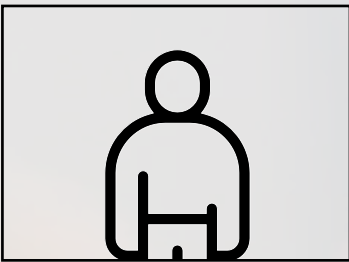
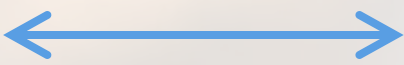
The feature that dramatically simplifies PTZ camera operation in locations such as classrooms, conference rooms, and stage environments, by enabling compatible Sony SRG/BRC PTZ cameras to automatically keep track of a speaker while shooting.



Easy switching composition



Full body mode



Upper body mode

Track to keep the angle of the person within the image.

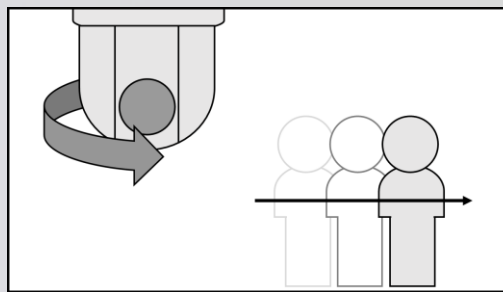
Supported cameras (as of 4th version)



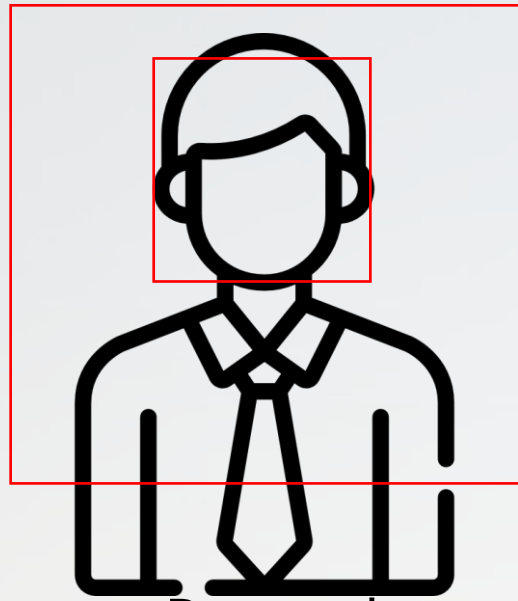
BRC-X1000	SRG-300SE*
BRC-H800	SRG-300H
BRC-X400	SRG-X120
SRG-X400	SRG-120DH
SRG-360SHE	

*SDI to HDMI conversion is needed

Sales Points



Highly Accurate critical thinking



- ✓Motion Detection
- ✓Face Detection
- ✓Color Pattern Recognition
- ✓Shape Recognition

Based on the multiple decision factor enables natural auto tracking of the target.

Support Sony PTZ Cameras

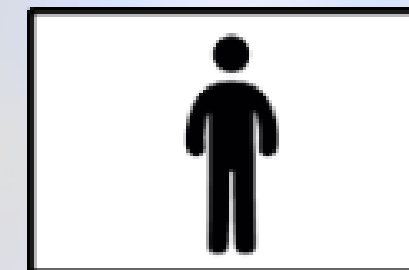
- BRC-X1000, X400, H800
- SRG-X400, X120, 360SHE, 300H, 120DH



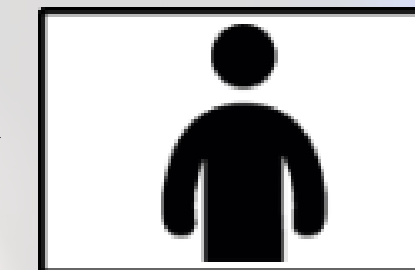
with fully detailed knowledge of the Sony camera's internal parameter and strict mechanical control, Smooth following control for natural angle that follows the speaker.

Easy switching composition

Full Body mode



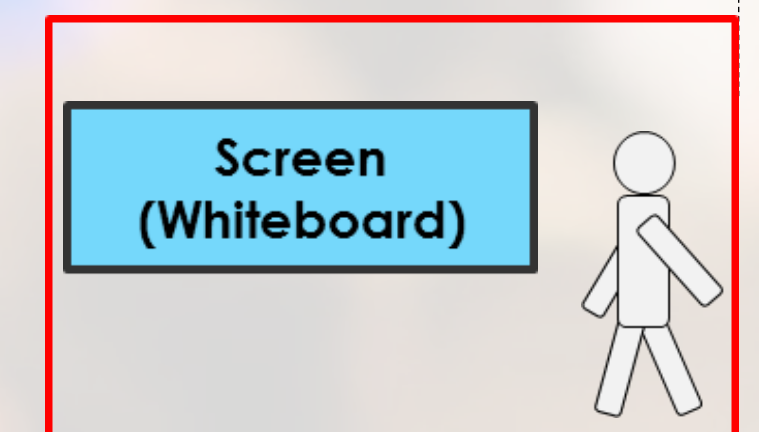
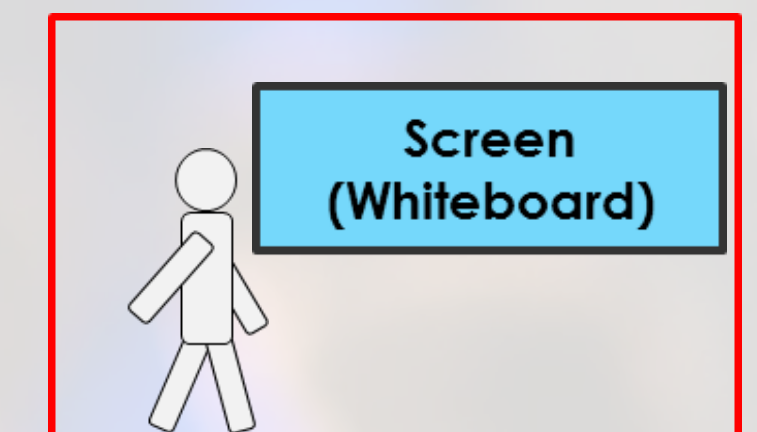
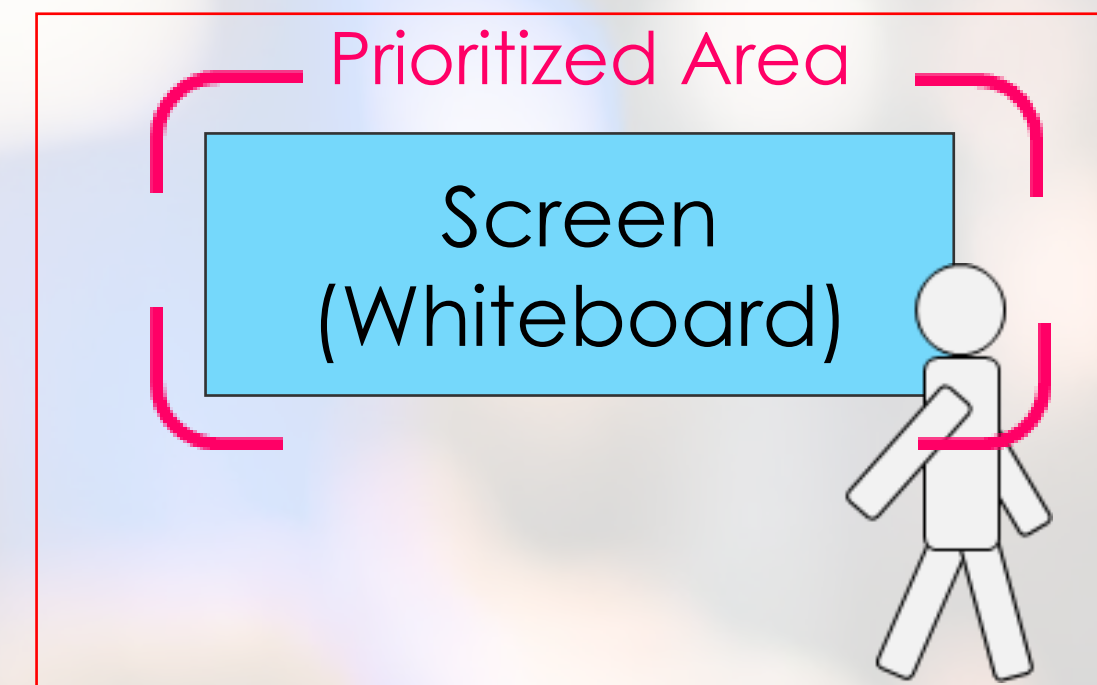
Upper Body mode



Track to keep the angle of the person to track within the image.

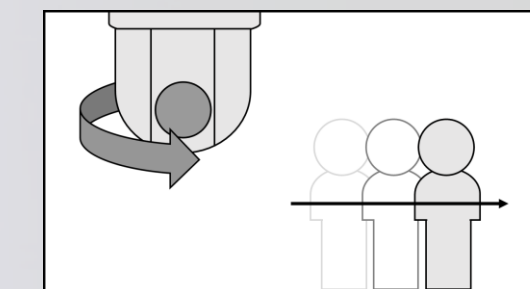
Fixed Frame Pan Tracking mode

Camera Angle



Track the person moving to the left/right in front of the screen while giving priority to keeping the contents of the screen.

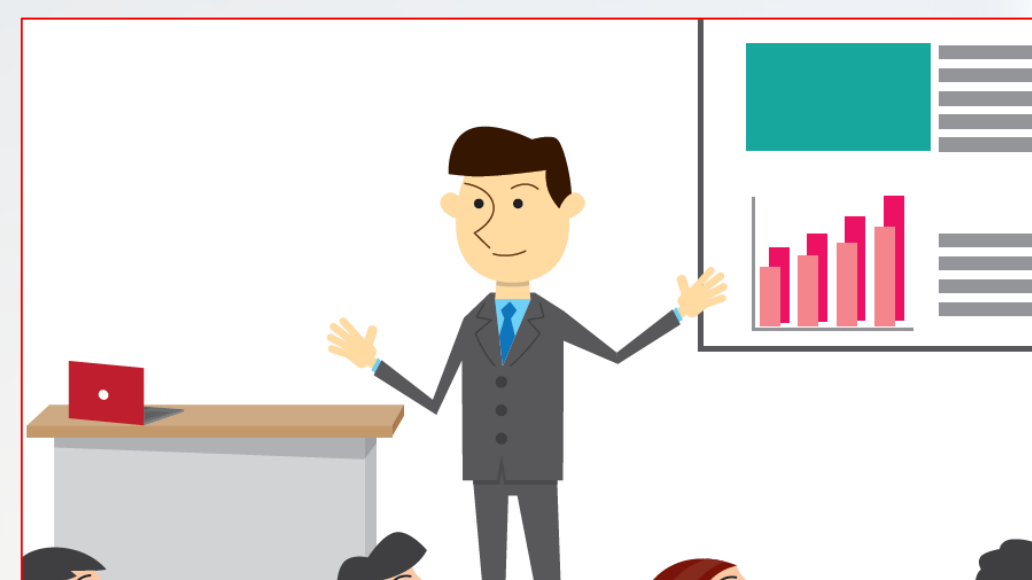
Adjusting Camera angle type for PTZ Auto Tracking



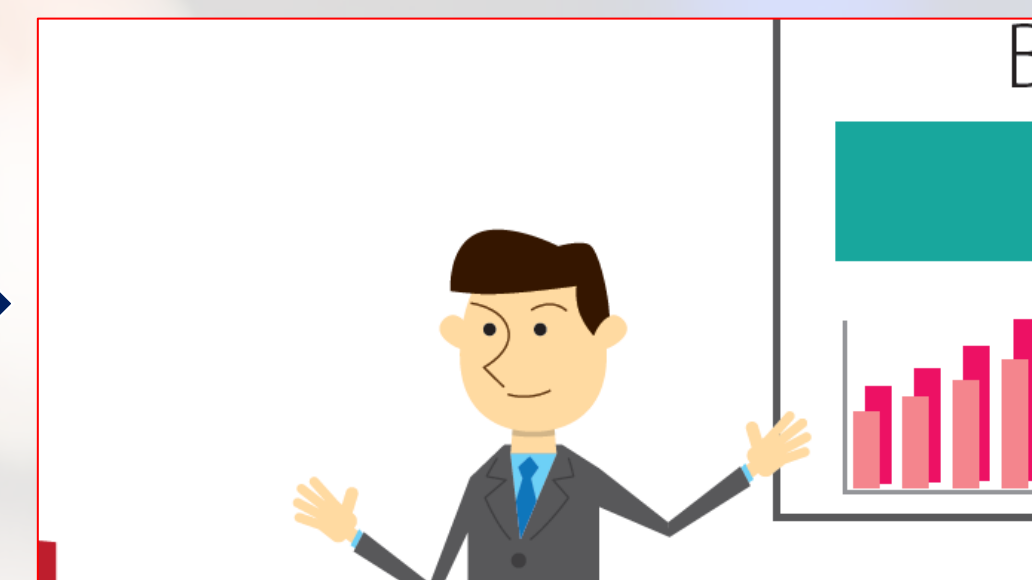
In addition two type of basic angle, you can fine tune the camera angle by using UI

The base angle can be set to “Upper Body” or “Fully Body”. You can also adjust the angle as desired using the fine adjustment function

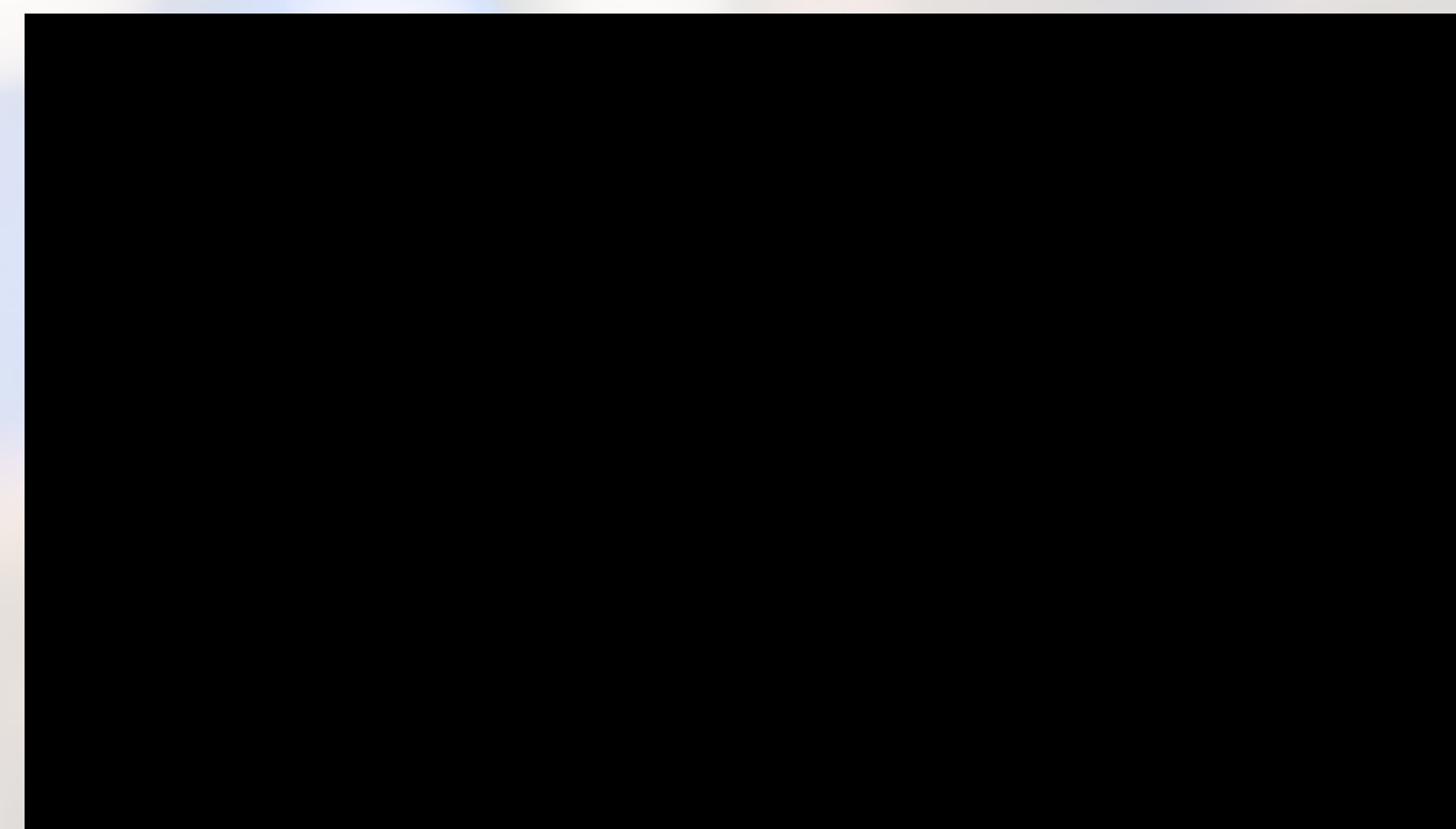
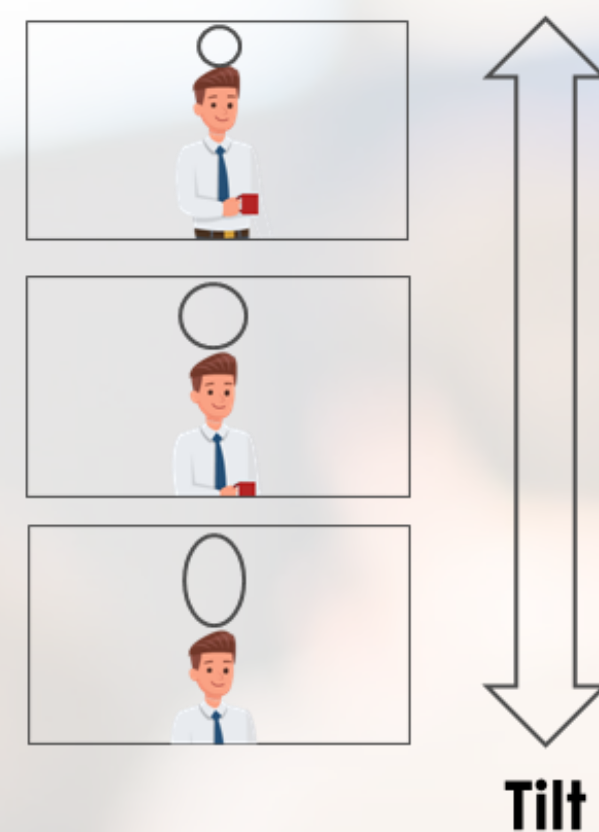
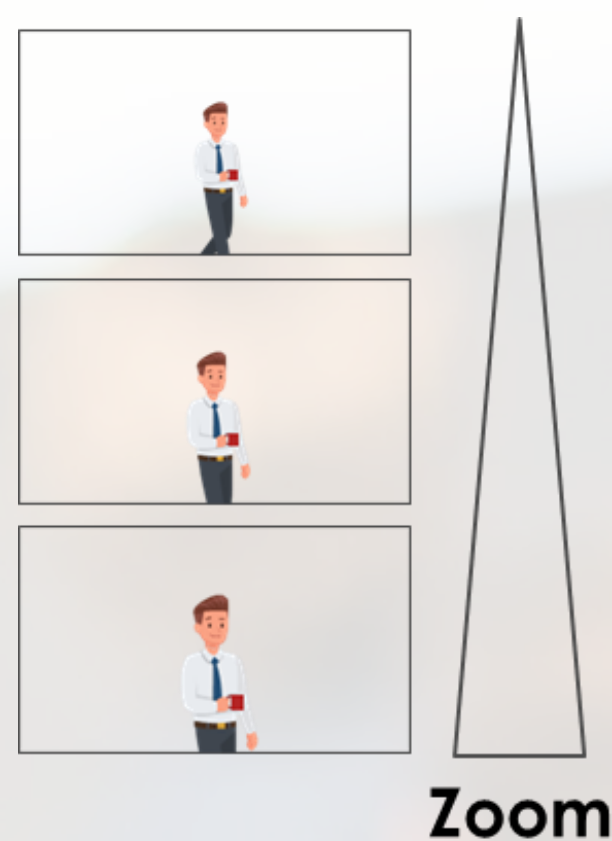
**tracking accuracy may little bit drop*



Before

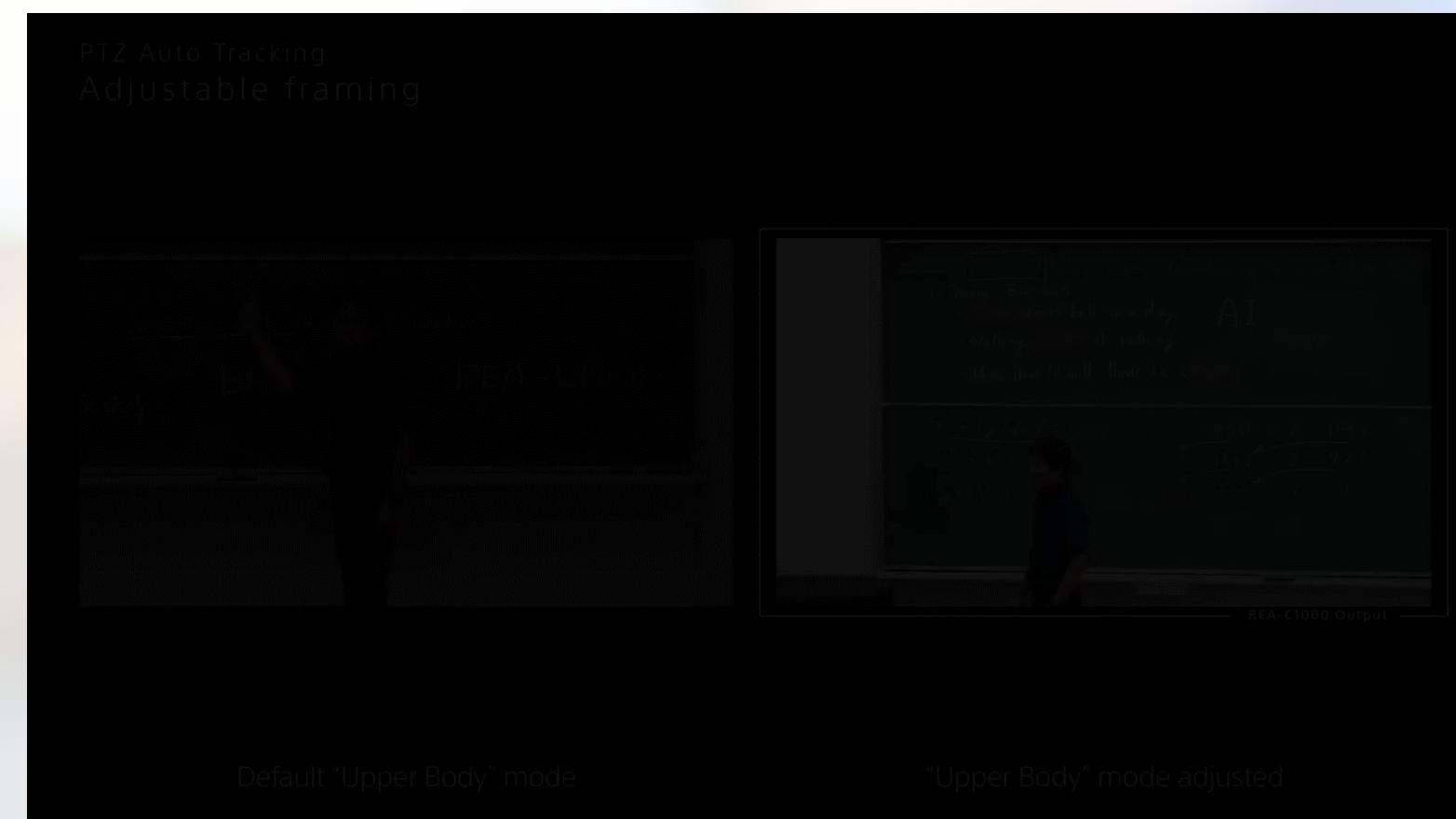
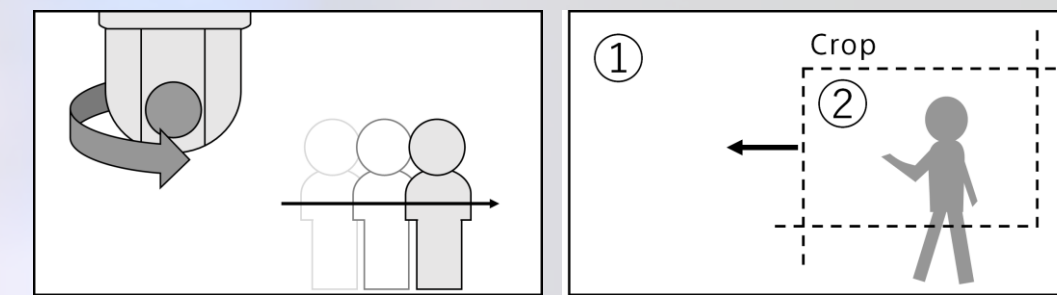


After



Tally light linkage with BRC/SRG

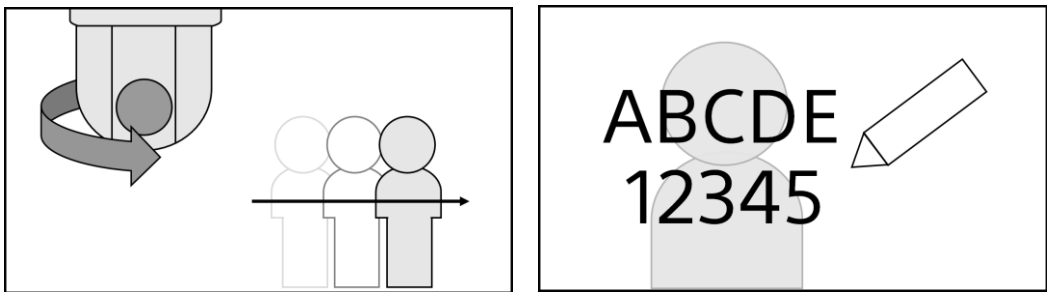
Can be used with the tally lamp of Sony remote cameras. Turning on the tally lamp during tracking and turning off the tally lamp when tracking is lost allows you to see whether the person is being automatically tracked. A speaker can recognize tracking is working or not during his presentation



Support Camera List

- BRC-X1000
- BRC-H800
- (BRC-H780)
- BRC-X400
- SRG-360SHE
- (SRG-280SHE)
- SRG-XB25
- SRG-XP1

Multiple feature works at the same time on one unit



To realize multiple function simultaneously. Our first scope is PTZ auto Tracking and Handwriting Extraction.

PTZ Auto Tracking

Detecting

Reset Camera

Adjust Framing

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

Stop Stream

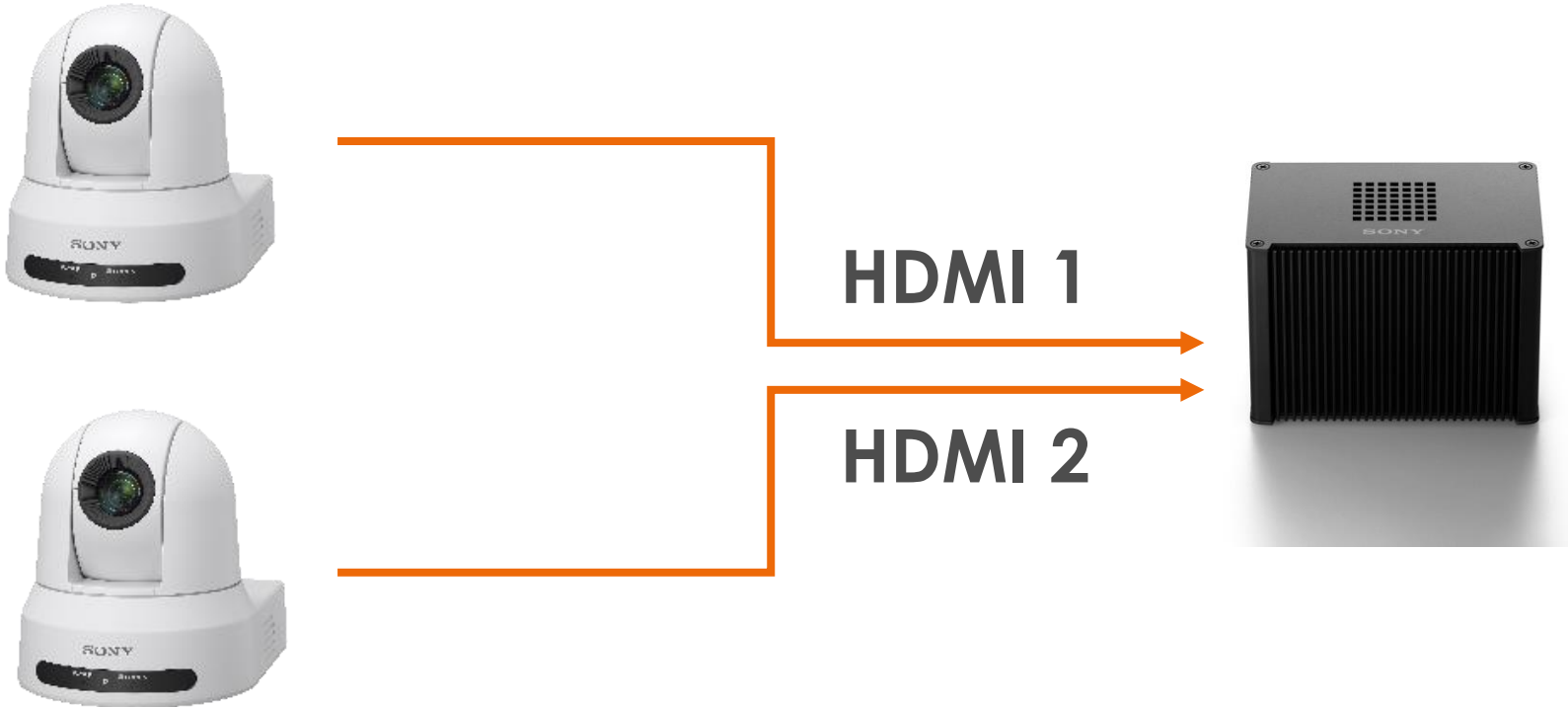
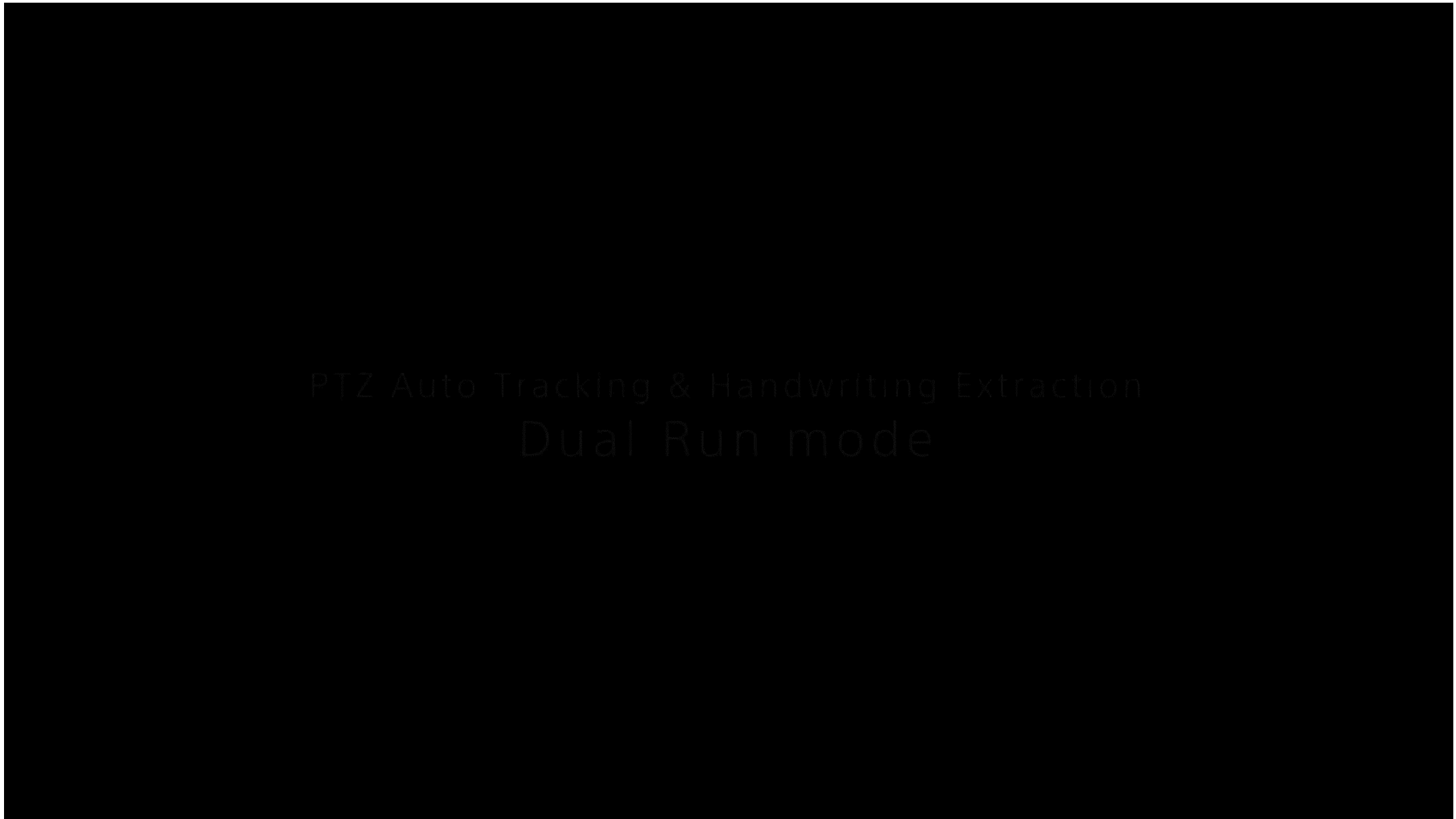
Handwriting Extraction

Handwriting Detected

Refresh

Show Person

30%



You can communicate, more than imagined.

System Example

PTZ Auto Tracking for auditoriums

User benefit

The RCA-C1000 + L0200 behaves like a virtual camera operator to control the connected PTZ camera, following the person on the stage smoothly and accurately, even if he/she moves around or turns his/her back to the audience.



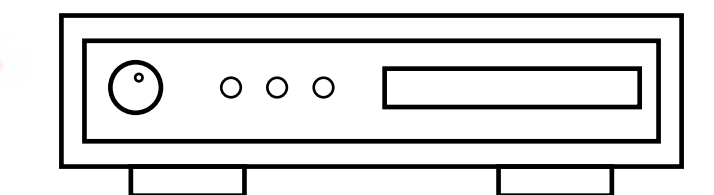
Camera SRG-X400



REA-C1000 + L0100



HDMI Splitter



Recording System

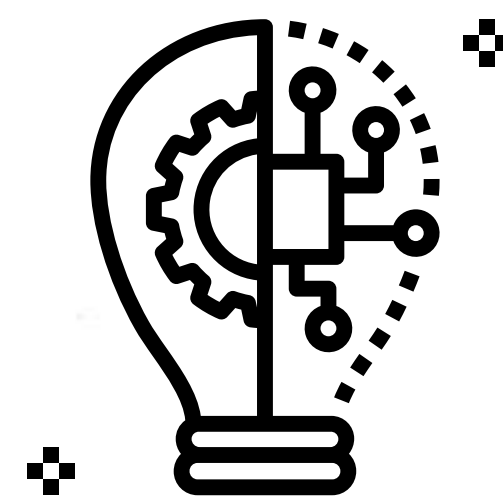
Camera controller

Setup/Operation PC



HDMI

Network cable

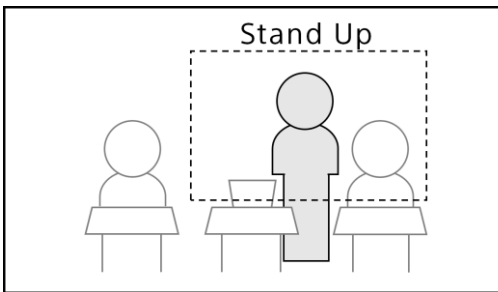


Close-ups by Gesture

REA-L0300

Audience member Close-ups by Gesture

The video is able to recognise when someone stands up from a seated position, and automatically zoom in on the corresponding location. You can display both a wide-angle view and an electrically zoomed view in real time.



Whole image



Stand up



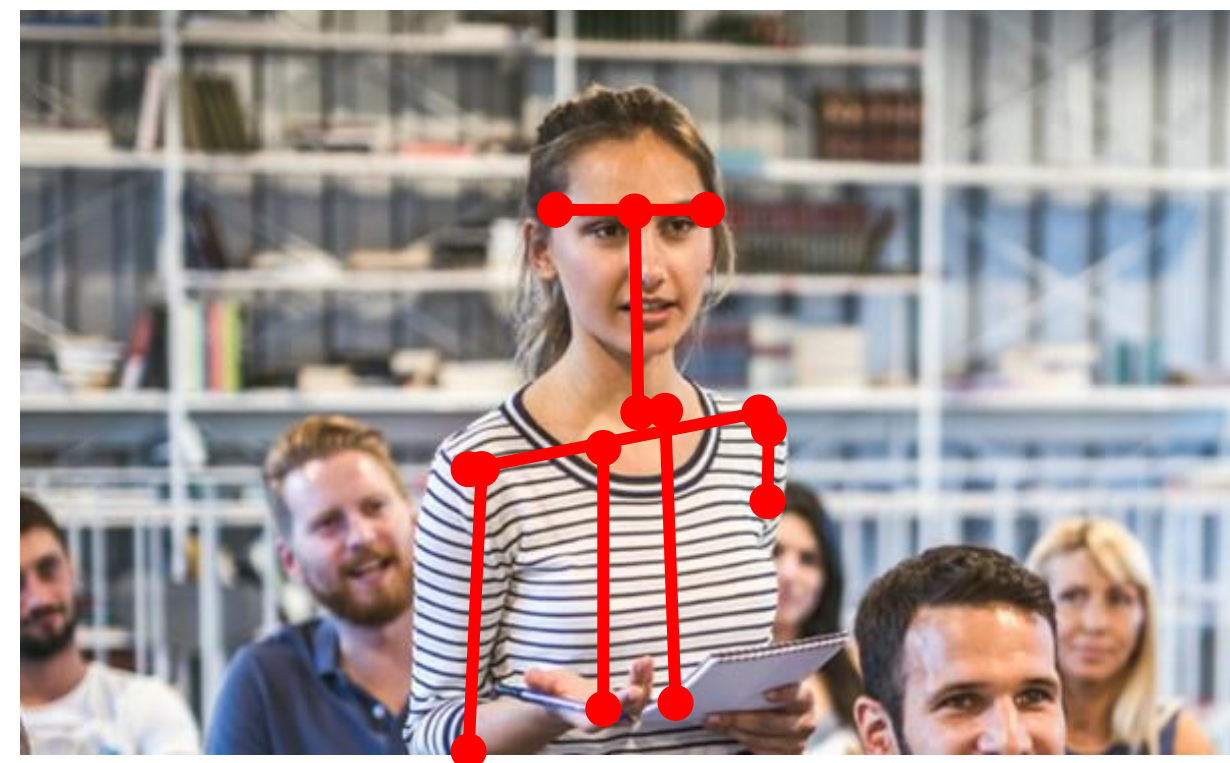
Auto zoom



Whole image



Sit down

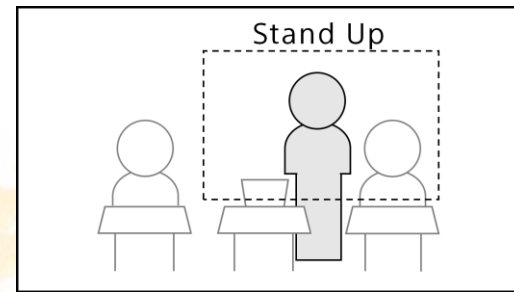


Stand up

Pose Estimation enables interpretation of “sit down” and “stand up”.

System Example

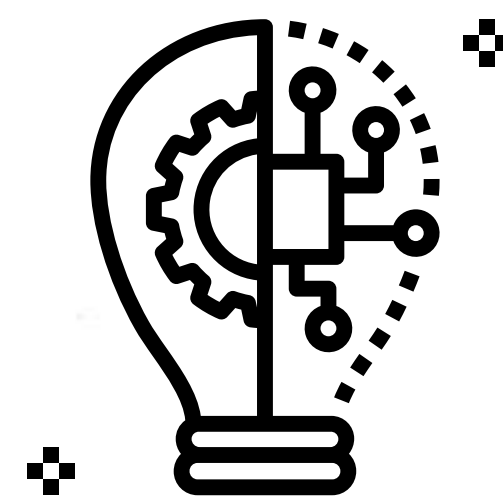
Close-up by gesture for classroom



User benefit

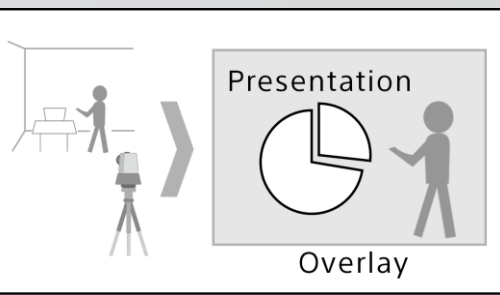
The function is triggered on when a person stands up. The application electronically zooms in on the person (for a close-up). When the person sits down, the function is triggered off and the zooming is cancelled. The original image can be output at the same time as the overview image.





Chroma key-less CG overlay

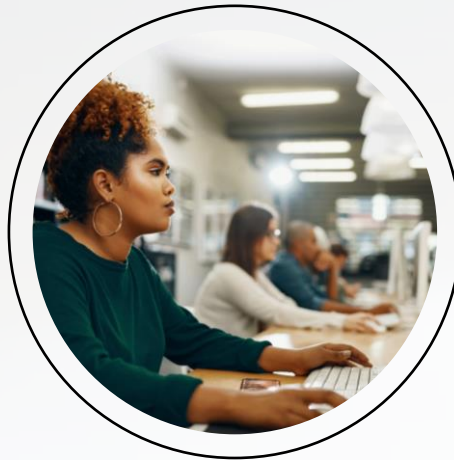
REA-L0400



Chroma key-less CG overlay

Provides the simple approach of a chroma key solution, based on our motion detection technology – generating enough quality overlay contents in real time, without a dedicated studio and skilled staff.

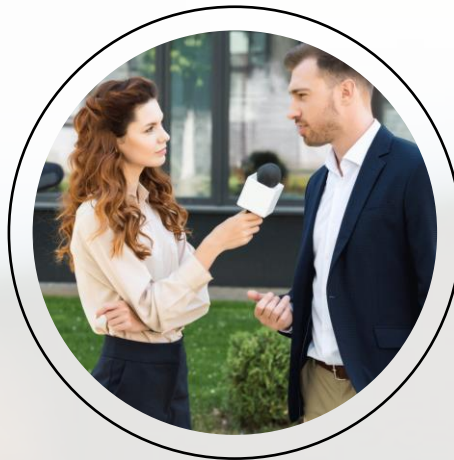
Ideal for



Online lesson/MOOCs



CEO message video



Interview

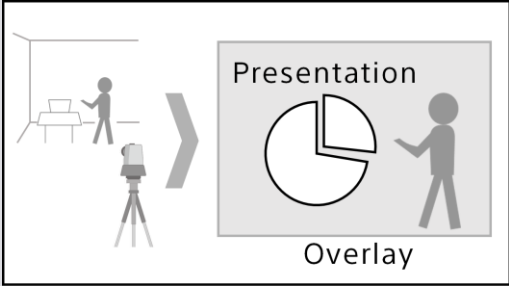


Webinar/E-learning

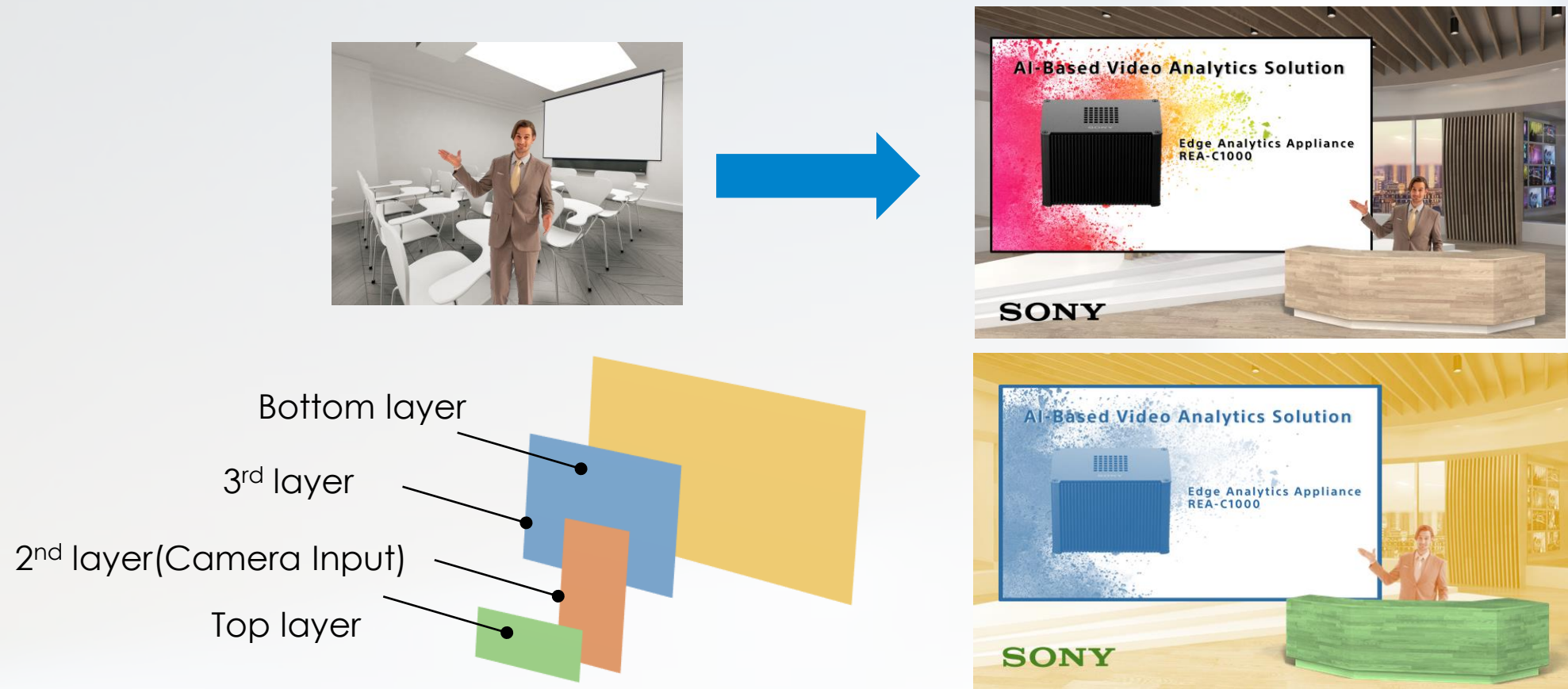
Not for cinema and high-budget broadcasting



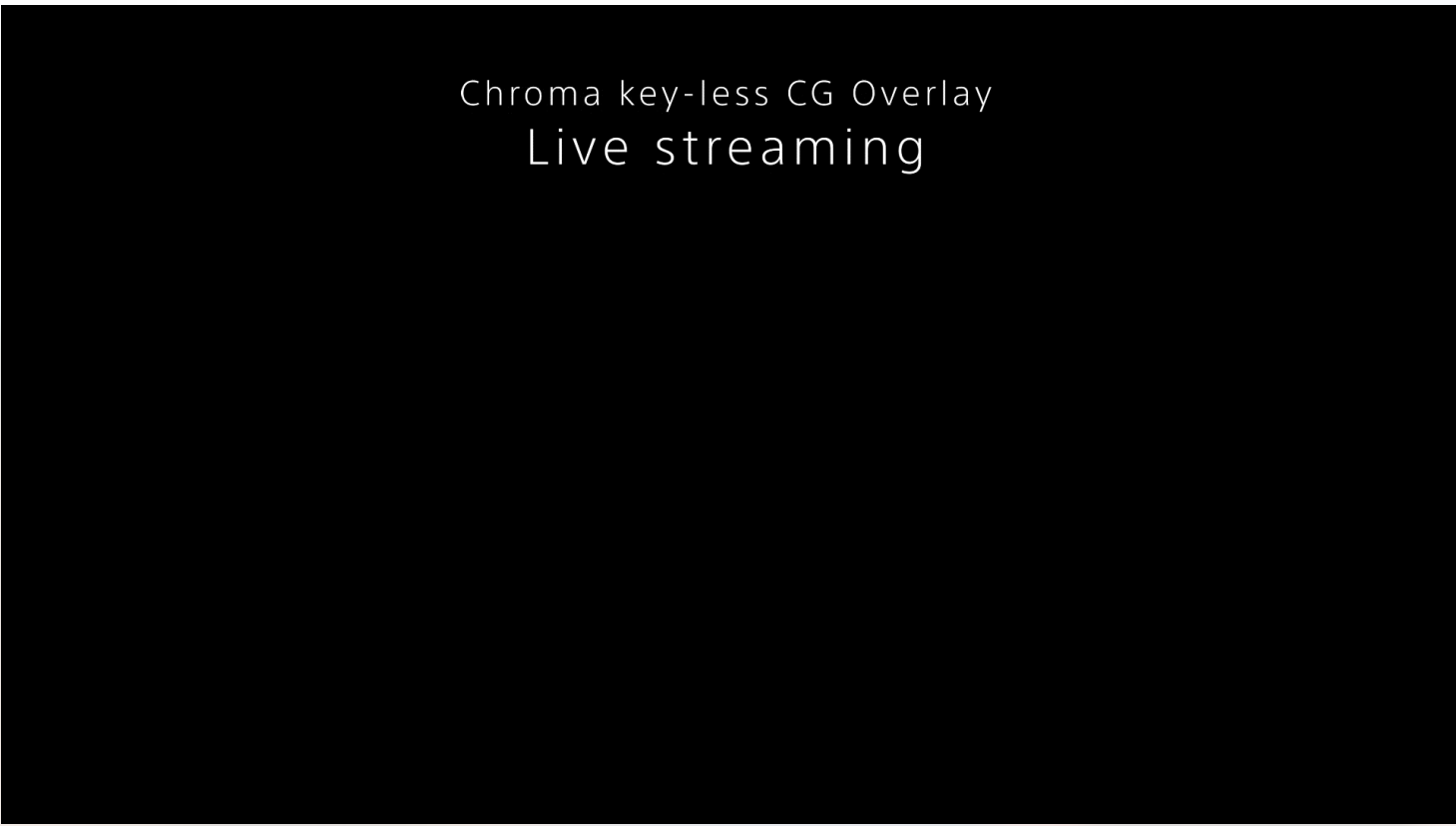
Sales Points



Supported multiple layered contents



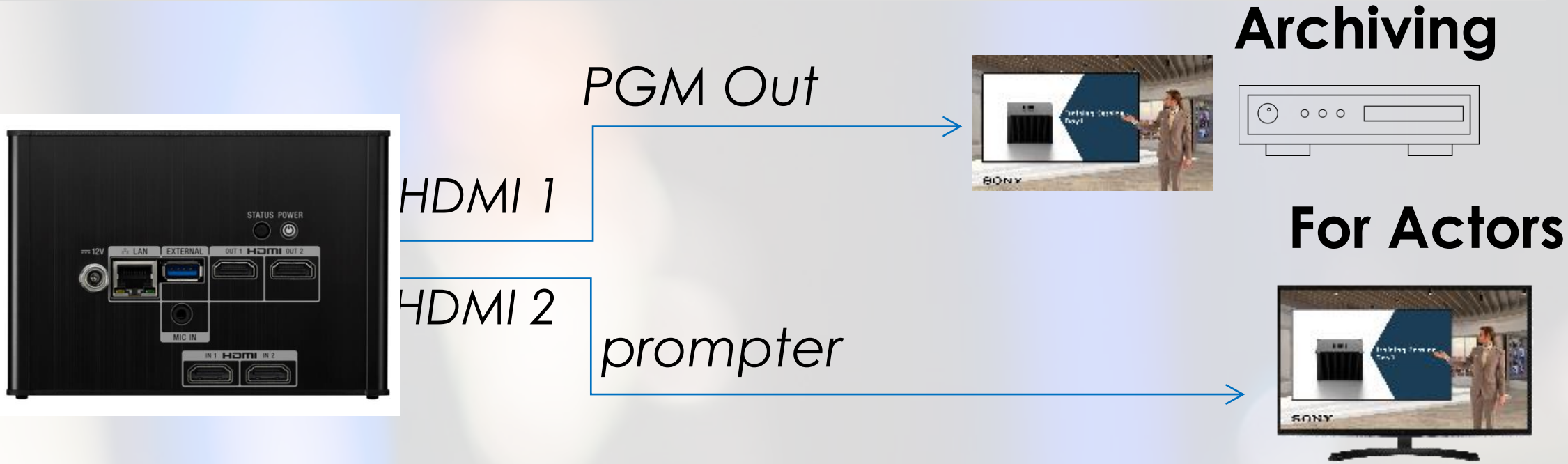
You can insert a company logo or CG furniture in front of an Actor.



SONY

You can communicate, more than imagined.

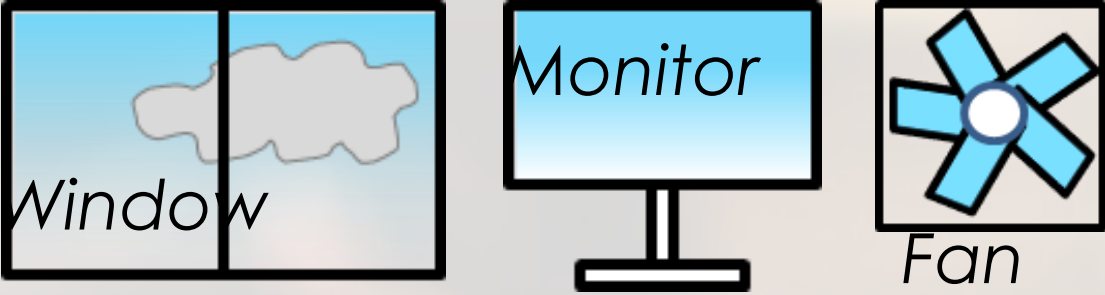
2nd output for Actors



Mask Area Setting for disturbance suppression

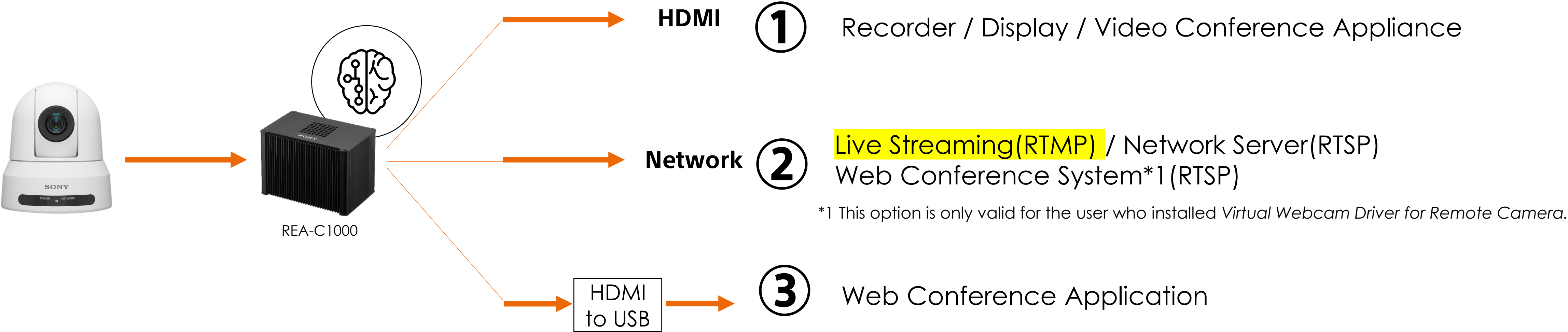
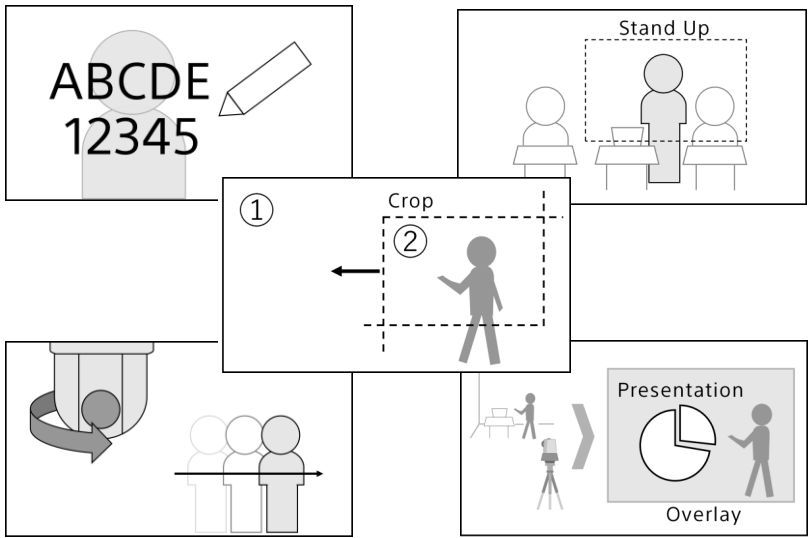


For Example...



Mask area provides protected overlay video from moving objects.

Livestreaming from Edge Analytics Appliance



You can communicate, more than imagined.

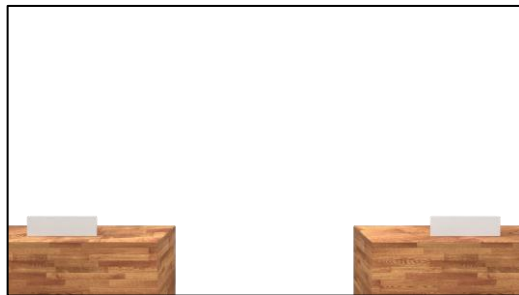
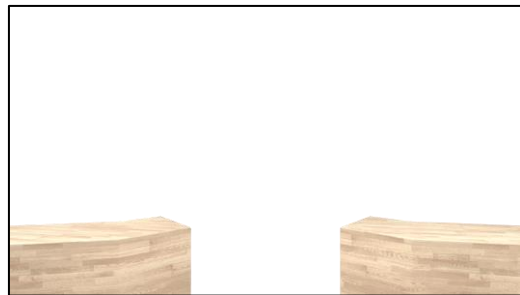
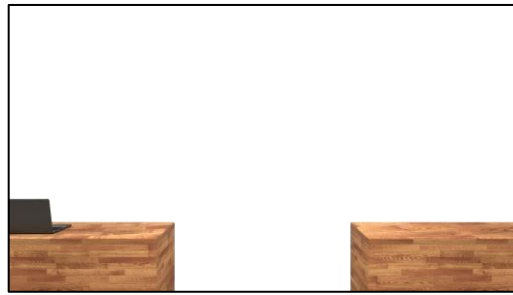
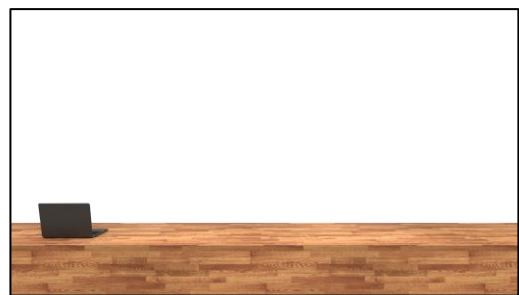
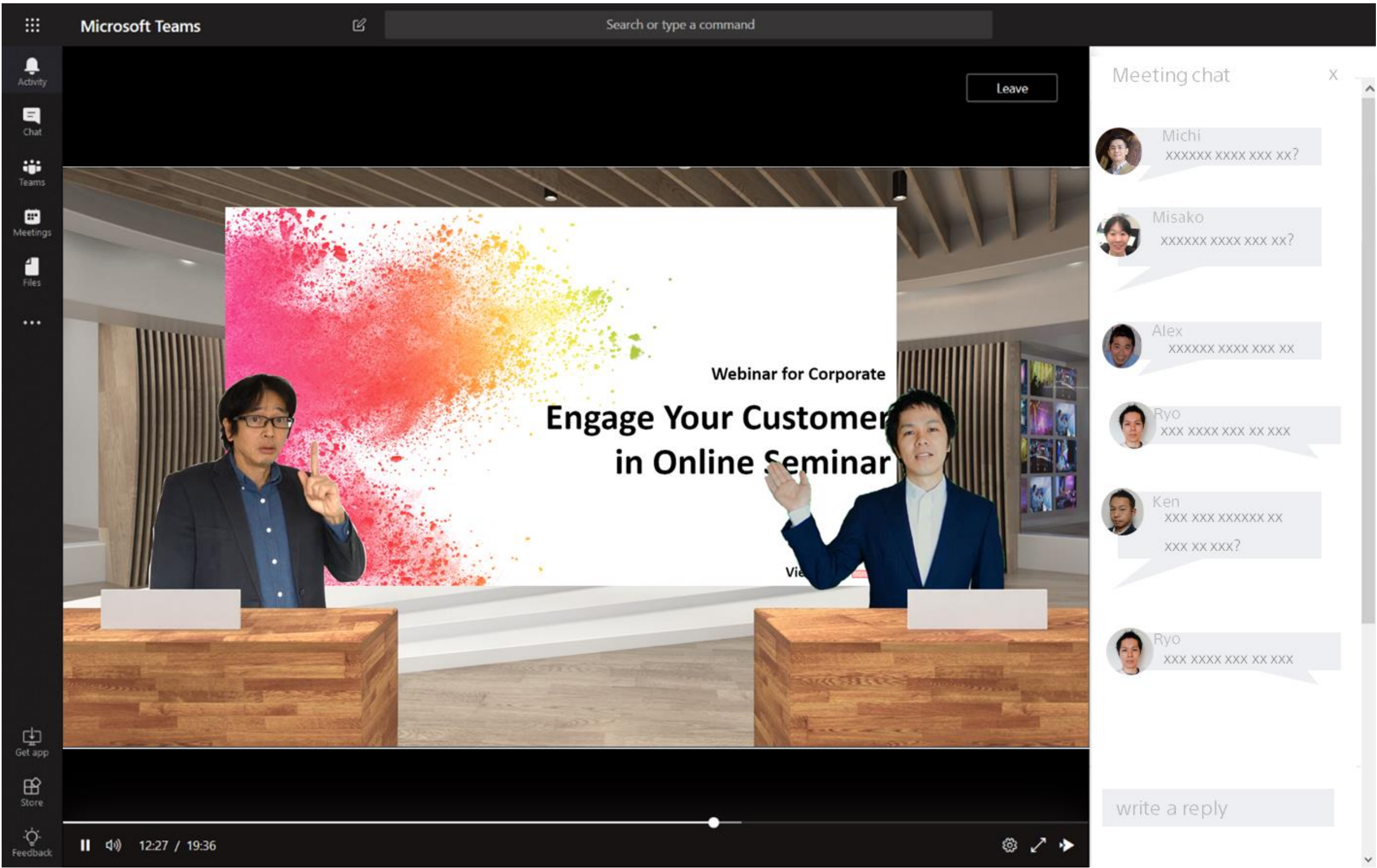
To create your original presentation style



SONY

You can communicate, more than imagined.

To create your original presentation style



SONY

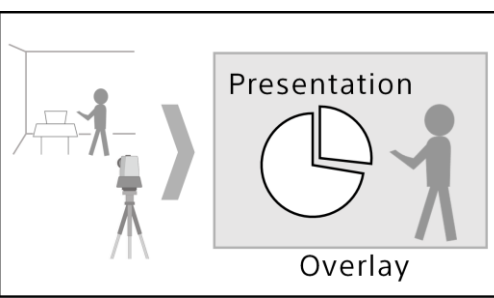
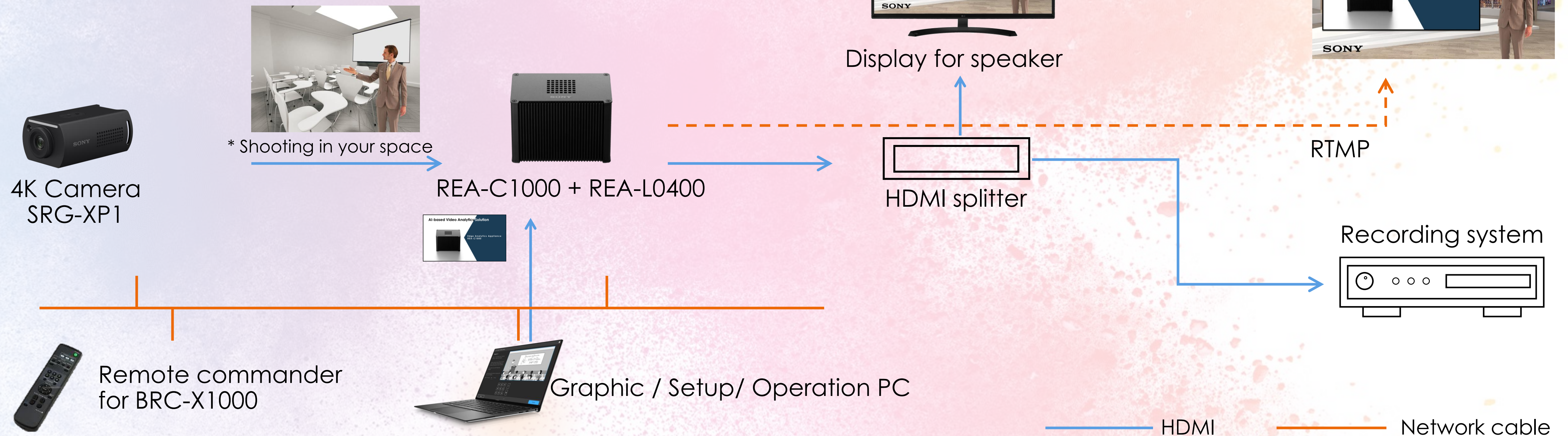
You can communicate, more than imagined.

System Example

Chroma key-less CG overlay for small studio

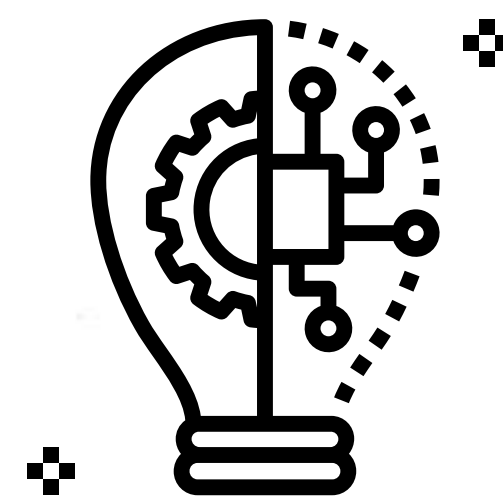
User benefit

This function provides the simple and convenient approach of a chroma key solution using motion detection technology. It generates enough quality overlay contents in real time, without a dedicated studio and skilled staff.



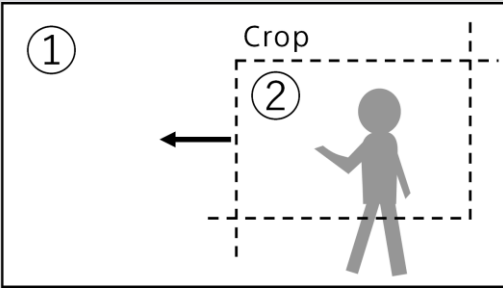
Live streaming





Focus Area Cropping

REA-L0500



Focus Area Cropping

This application simultaneously displays a wide-angle view and a cropped view from a single camera, by focusing on a separate area of video from the main image in real time.



2 streams from a single cam

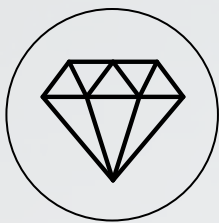
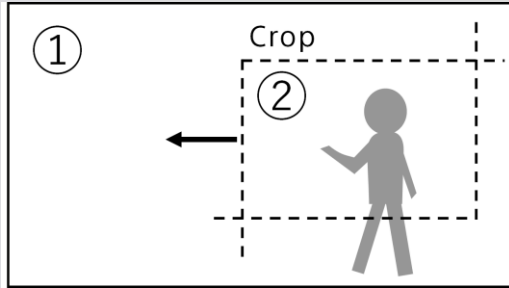


Whole 4k video



Cropped FHD

Focus Area Cropping



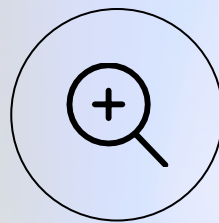
A single camera can capture high quality images of a whole scene, while intelligently following and outputting close-up views of a moving speaker using Sony proprietary video analytics technology.



Angle of interest



Stage



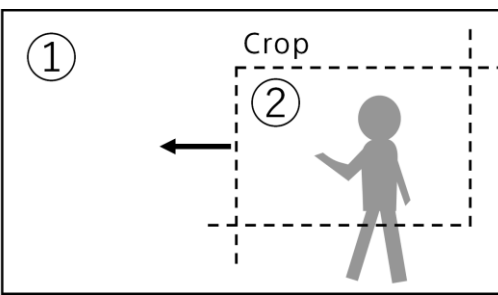
A single camera can capture high quality images of a whole scene, while simultaneously outputting close-up views according to a preset region and manual operation, via a web browser.

Fixed area

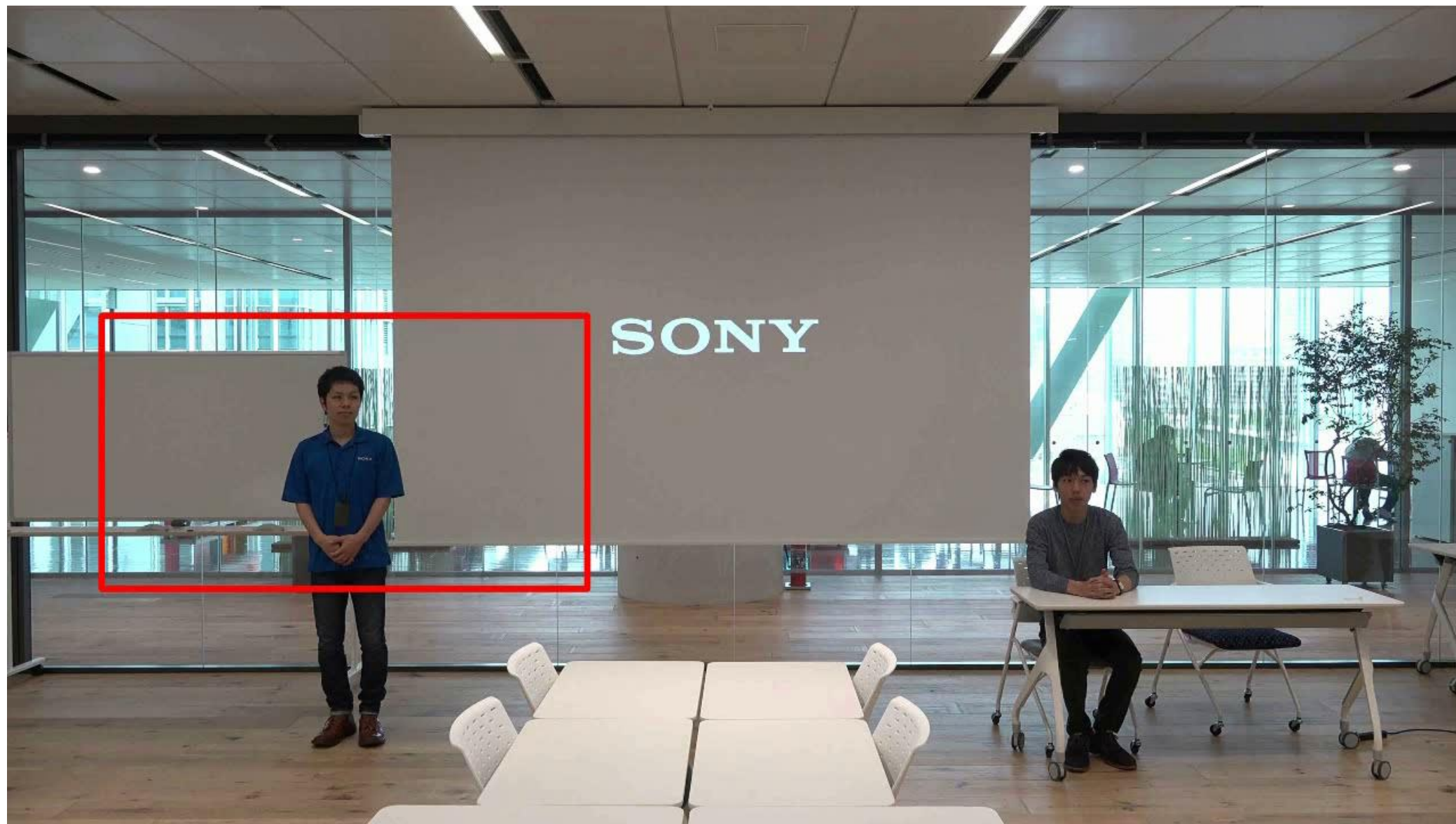


Screen

Sales Points



Super Stable E-Tracking



To offer motion based stable cropping
(support **e-Pan, e-Tilt & e-Zoom** automatically)

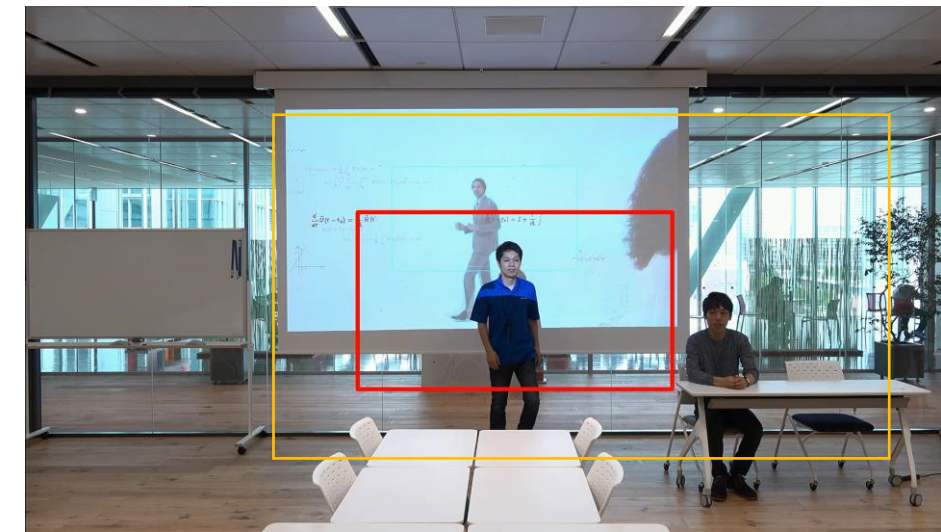
- ✓Motion Detection
- ✓Color Pattern Recognition
- ✓Shape Recognition
- ✓Face Detection

SONY

Selectable output like a switcher

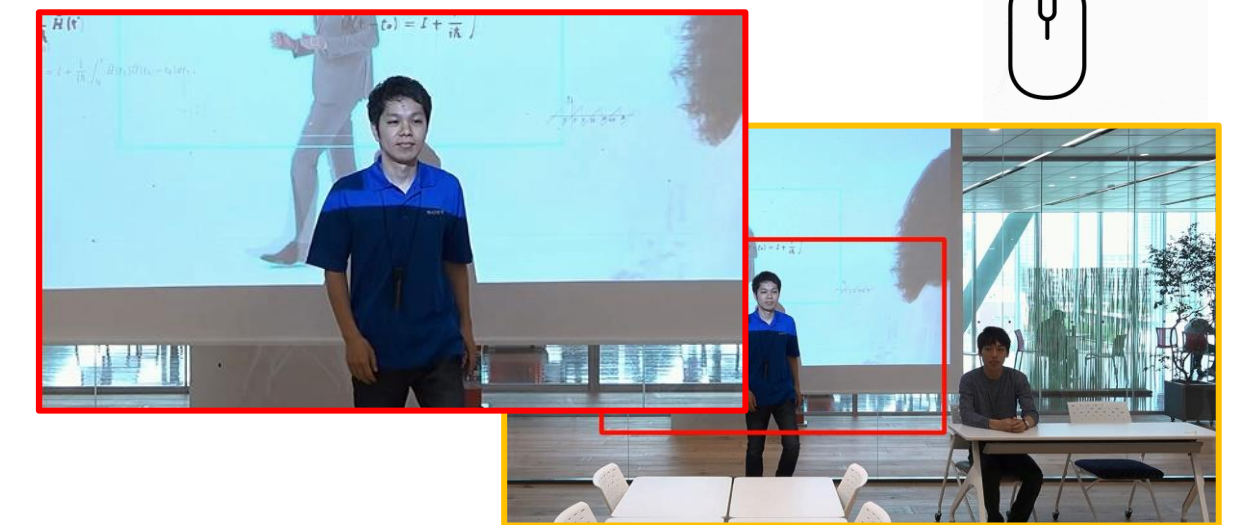
Up to 2 specific areas are cropped while shooting at the same time. You can select operation mode from “Focus Area cropping” and “Fixed Area cropping” for each specific area.

4K HDMI OUT 1



4k High Quality
Whole View

**Full HD
1080** HDMI OUT 2

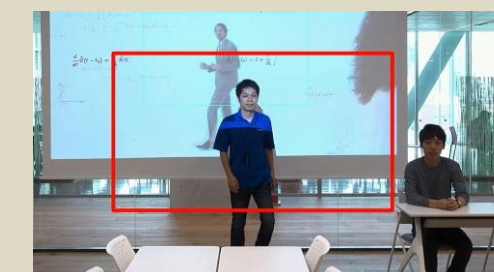


Selectable output from 2
cropped videos

You can select program output from HDMI2 while live operation!!

Real-time Up/Down Conversion for HDMI OUT 2

3840 x 2160



960 x 540

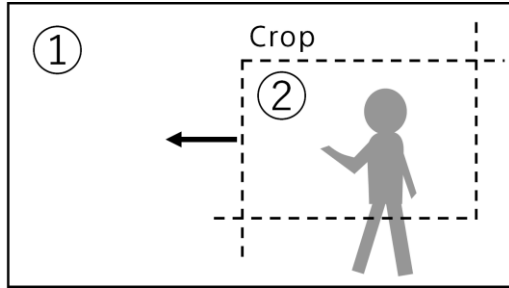


**Full HD
1080**

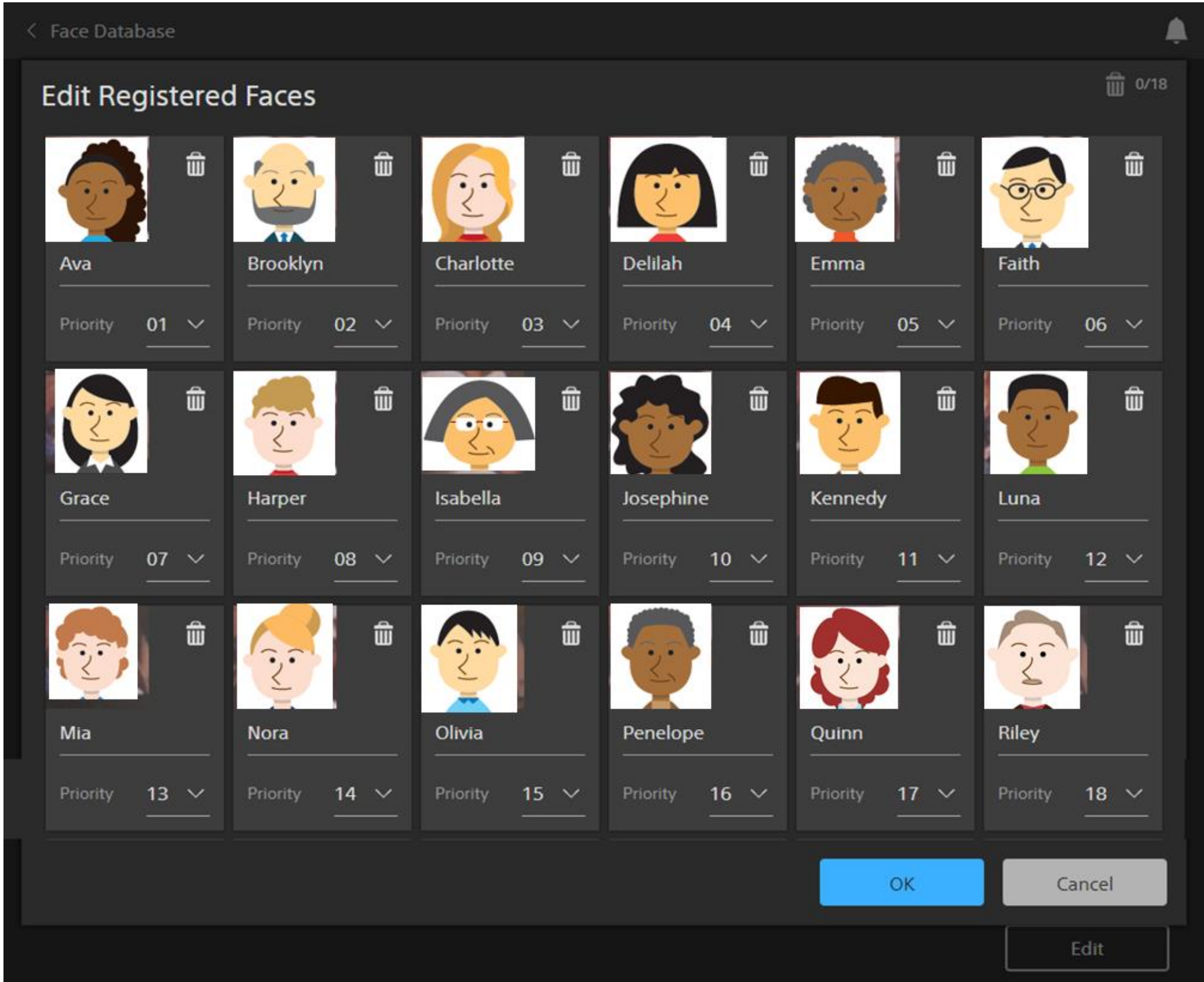
To provide FULL HD(1920) video

You can communicate, more than imagined.

Focus Area Cropping Supports Face Identification

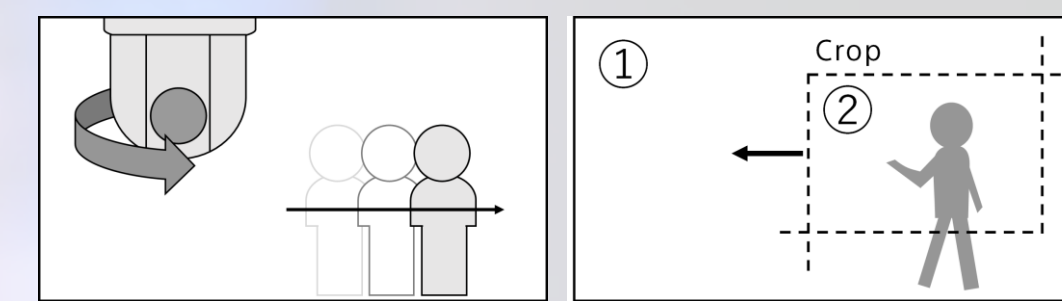


Once faces have been registered in advance, they can then be automatically tracked when in camera view. You can control priority.

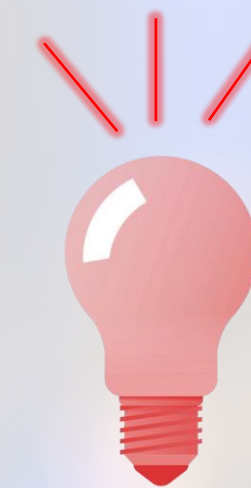


Face Data Base (Up to 100 people)

Tally light linkage with BRC/SRG



Can be used with the tally lamp of Sony remote cameras. Turning on the tally lamp during tracking and turning off the tally lamp when tracking is lost allows you to see whether the person is being automatically tracked. A speaker can recognize tracking is working or not during his presentation

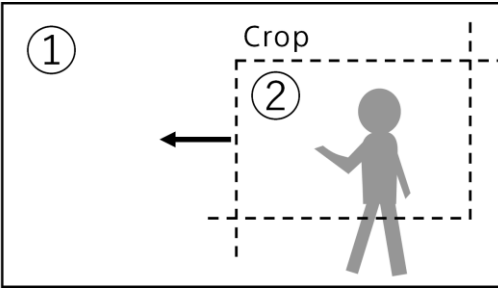


Support Camera List

- BRC-X1000
- BRC-H800
- (BRC-H780)
- BRC-X400
- SRG-360SHE
- (SRG-280SHE)
- SRG-XB25
- SRG-XP1

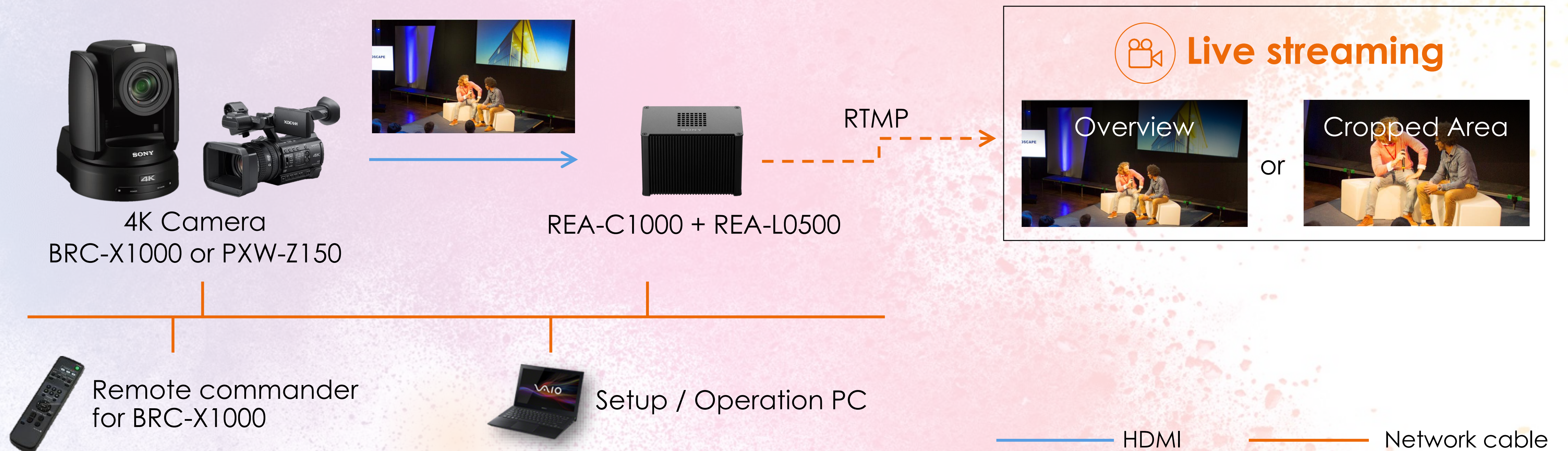
System Example

Focus Area Cropping / Fixed Area Cropping for event space



User benefit

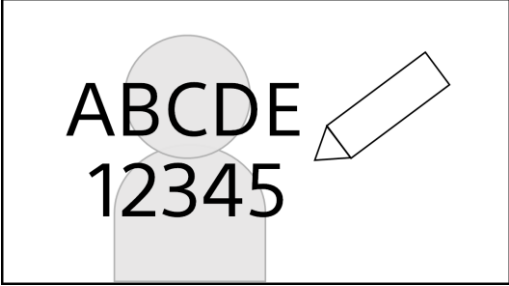
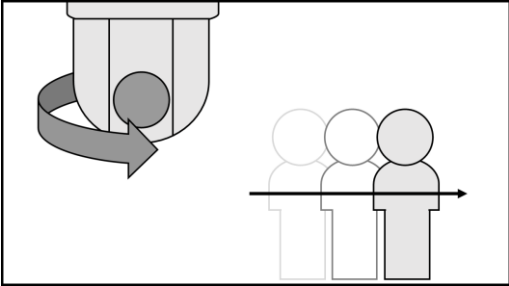

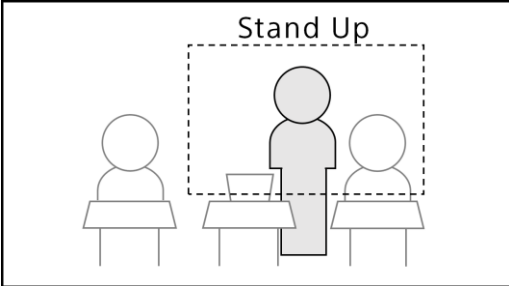
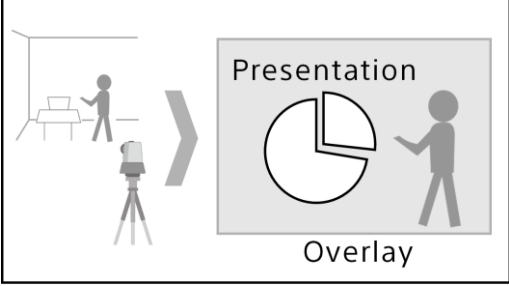
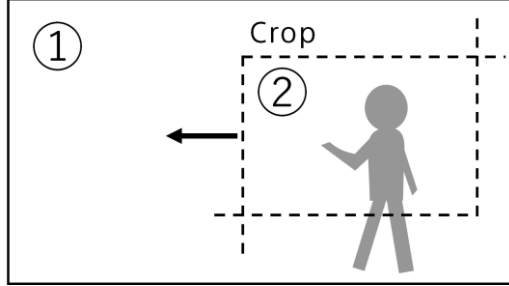
This function delivers both the overview and cropped view from a single camera in real time. Focus Area Cropping*: Intelligently follows the moving speaker (* Required optional license 'REA-L0500') Fixed Area Cropping: Close-up according to the pre-set region.





Specification

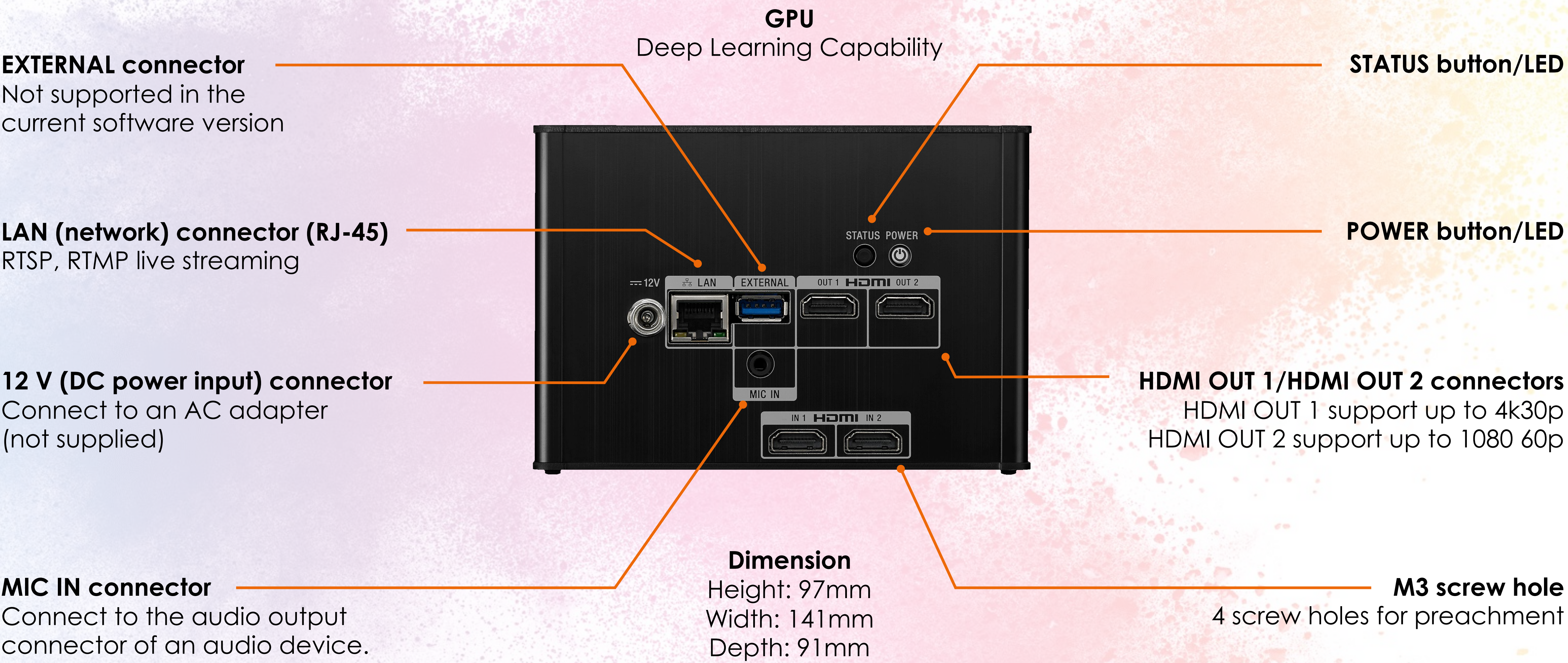
Support Camera Matrix (as of Oct 2020)

Features		Recommend Camera
	Handwriting Extraction REA-L0100	BRC-X1000, BRC-H800, BRC-X400 SRG-X400, SRG-X120, SRG-XB25, SRG-XP1 XDCAM Series *BRC & SRG series have high robustness than other camera due to deep integrate with REA-C1000
	PTZ Auto Tracking REA-L0200	Supported Camera : BRC-X1000, BRC-H800, SRG-300H, SRG-300SE, SRG-120DH, BRC-X400, SRG-X400, SRG-X120, SRG-360SHE 
	Close-up by Gesture REA-L0300	XDCAM Series, BRC-X1000, BRC-X400, SRG-X400, SRG-XB25, SRG-XP1 *recommend 4K wide angle camera.
	Chroma key-less CG Overlay REA-L0400	XDCAM Series, A7 Series, BRC-X1000, BRC-X400, BRC-H800, SRG-X400, SRG-XP1 *recommend good picture quality camera.
	Focus Area Cropping REA-L0500	PXW-FS7, PXW-Z150, PXW-Z190, PXW-Z280 BRC-X1000, BRC-X400, SRG-X400, SRG-XB25, SRG-XP1 *recommend 4K wide angle camera.

SONY

**3rd party's camera isn't able to bring out accuracy of our video analytics.*
 You can communicate, more than imagined.

Hardware specification



Specification

Specification	Description
Handwriting Extraction	Required License. (60-day trial license is built-in as default)
PTZ Auto Tracking	Required License. (60-day trial license is built-in as default)
Close-up by Gesture	Required License. (60-day trial license is built-in as default)
Chroma key-less CG overlay	Required License. (60-day trial license is built-in as default)
Focus Area Cropping	Required License. (60-day trial license is built-in as default)
Fixed Area Cropping	Crop the static area of the whole view at once.
Intuitive Web based User Interface	Supports Google Chrome Ver. 70 or later
HDMI IN 1	Up to 4K 30p (3840×2160 / 29.97P, 25P)
HDMI IN 2	Up to FHD 60p (1920×1080 / 59.94P, 50P)
HDMI OUT 1	[EDID] : Automatically determine and output a video image that is compatible with the connected output device. Up to 4K 30p (3840×2160 / 29.97P, 25P)
HDMI OUT 2	[EDID]: Up to FHD 60p (1920×1080 / 59.94P, 50P)
Network (LAN)	RJ-45 (1000BASE-T)
DC power input	12V5A (required 3 rd party AC Adapter)
MIC IN	Stereo, ø3.5 mm mini jack
HDMI Embedded Audio	Supported
RTSP, RTMP live streaming	H.264
IPv4, IPv6	Internet Protocol version
Role-based Authorization	Access permissions of one administrator and nine general users
Access Restrict	Configure the security function to restrict the computers that can access the unit
Dimension / Mass	Height: 97mm, Width: 141mm, Depth: 91mm / Approx. 0.86kg
Operating temperature	5 °C to 40 °C (41 °F to 104 °F)

Thank you

SONY

