

REAL-TIME INTERACTIVE REMOTE-EDUCATION PLATFORM

# Live Edu (Livedu) Introduction

2020.08

Real-Time Interactive Remote-Education Platform 'Live Edu'

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## Why Live Edu

## ▶▶ Changing the Education Paradigm




Change of educational environment

Knowledge transferer

Study Guide (Teacher)

Rote Learning

Learning method for student's aptitude  
(administrator, teacher)



Changing the tele-education paradigm

Education,  
Training

Learning,  
Discussion

Anytime, Anywhere, Anyone

One-way → full-duplex



Information technology development

The explosive increase of Internet users

Development of Multimedia  
Communication Technology

Advancement of communication  
infrastructure

Popularization of mobile devices

“Is it possible to satisfy students / parents / teachers / administrators?”

## ▶▶ Change of educational environment since COVID-19

**“This storm will pass. But the choices we make now could change our lives for years to come”**

- Yuval Noah Harari (FINANCIAL TIMES MARCH 20 2020)

### The Digital transformation in school education

- Build online educational facility and system for future disaster preparation
- Develop online curriculum and student support system
- Develop various big-data related to student and accelerate education using AI

### Switching teaching methods by expanding online education

- Generalize Live Online-classes by expanding non-face-to-face class
- Develop various teaching support functions for high learning effects in Live Online-class
- Expanding Smalogue (Smart + analogue) education that combines smart education and face-to-face class

“The new normal of education in response to rapid changes in the educational environment due to COVID-19”



Real-Time Interactive Remote-Education Platform 'Live Edu'

# Chapter

## II

### Live Edu Introduction



# II ▶ Live Edu Introduction

Real-Time Interactive Remote-Education Platform 'Live Edu'

▶▶ Connect Live Online-classes anytime, anywhere



Livedu(Live Edu) provides a educational environment that teachers and students communicate and actively participate in classes even in Live Online-classes with various teaching and learning method



“Reliable Live Online-class solution”

# II ▶ Live Edu Introduction

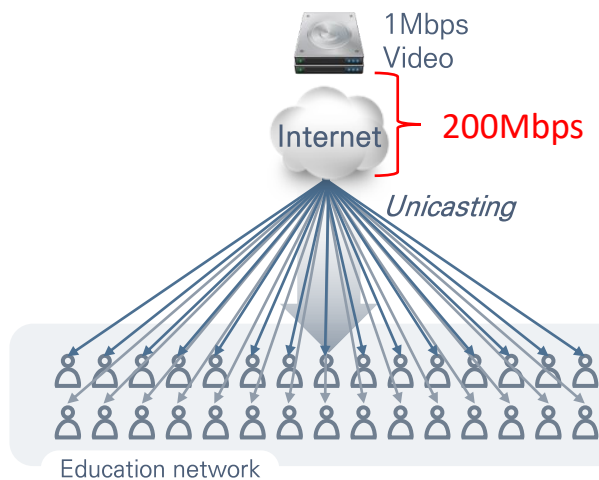
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## ▶▶ HD quality Online-class in low-bandwidth network



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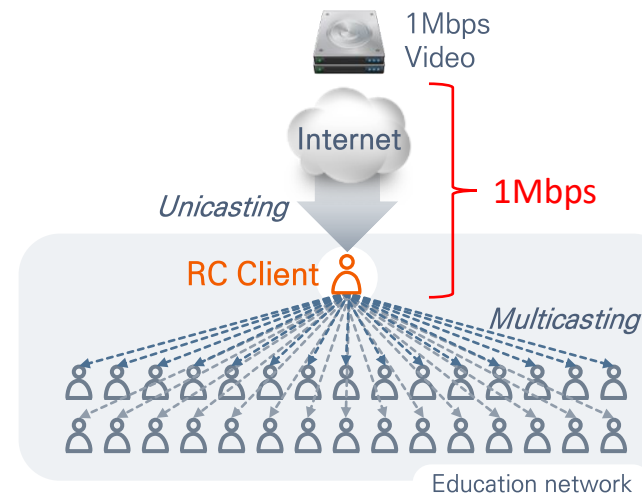
### Other companies service



200 student  
200Mbps Need

Service not possible, crowded education network

### Live Edu



200 student  
1Mbps \* RC user Need

Smooth service and education network

▶▶ Minimum download speeds need at least 800Kbps(PC), 400Kbps(Mobile device)



# II

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## ▶ Live Edu Introduction

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### ▶▶ Various types of teaching for effective education

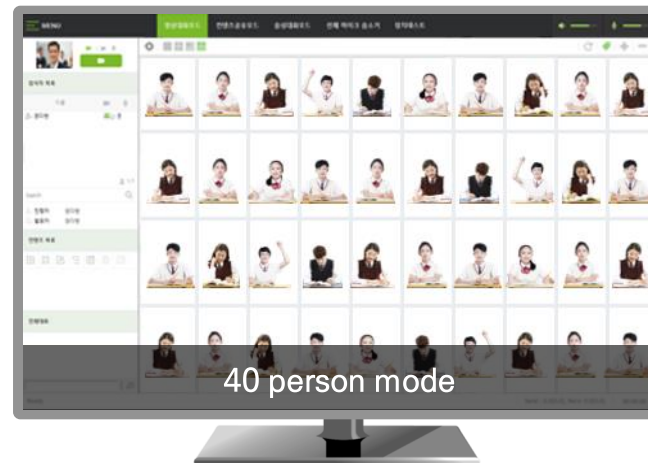


- ▶▶ Two-way Live Online-class for communication and active participation in class
- ▶▶ One-way Live Online-class for transferring knowledge to many students
- ▶▶ VOD class for students who are regardless of time

# II ▶ Live Edu Introduction

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## ▶▶ Various size of Live Online-class can be opened



- ▶▶ Large number of people can participate in Live online-class at the same time by High image compression and network security technology
- ▶▶ Various size of Live Online-classes can be opened such as 10, 40, 60 or 225 people

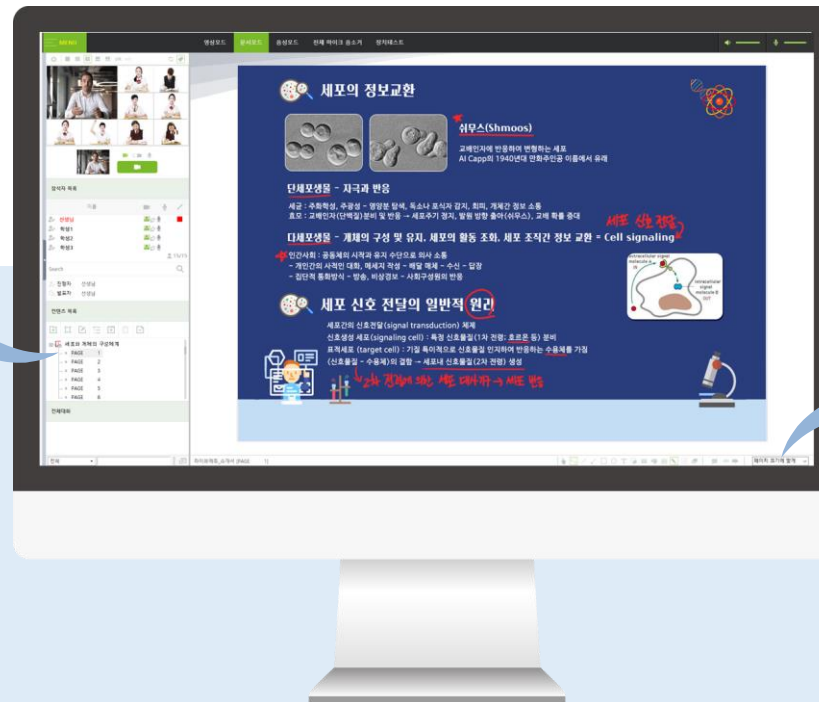
# II ▶ Live Edu Introduction

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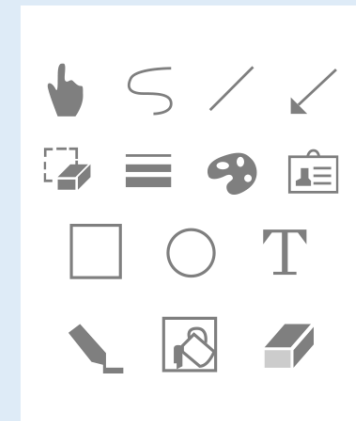
## ▶▶ Teaching with various type of docs and images as class materials



Any type of docs & images are uploaded



Select shapes & color  
type text and draw a line



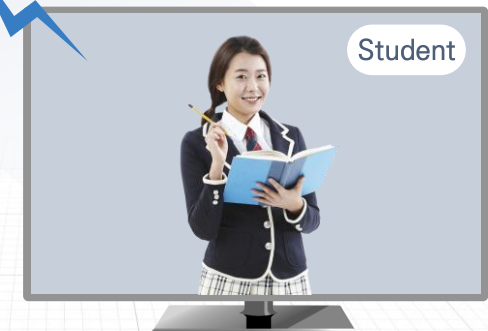
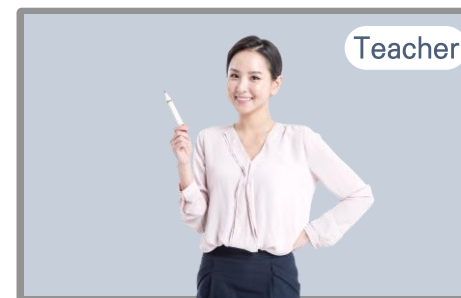
- ▶▶ Upload any type of documents and images as class materials
- ▶▶ Teacher can clearly deliver contents of the class with whiteboarding.

## ▶▶ Removing user's background for privacy

Nomal Live Online-class



▶ Live Online-class with removed user's background



- ▶▶ During Live Online-class, user's backgrounds are removed & unified by 2D Segmentation technology. It makes highly immersive Live Online-class avoiding visual congestion.
- ▶▶ Protect personal privacy

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## ▶▶ Create virtual-reality(VR) studio without chroma key studio



### Other Companies service

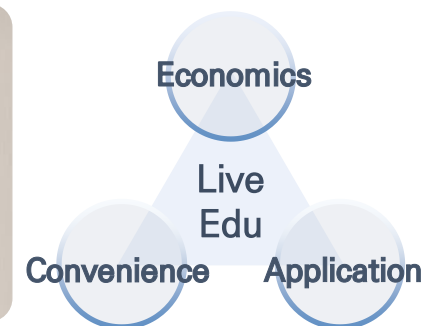
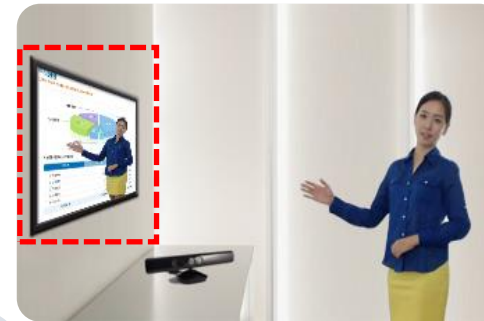


- Requires chroma key studio
- Requires software for chromakey processing
- Requires expensive hardware equipment

- Requires complex mechanical processes and experts for virtual reality image processing

- Limited usage  
(unidirectional services such as broadcasting)

### Live Edu



#### Space Restriction

- No chroma key studio requires
- Create perfect Virtual-Reality studio with simple devices

#### Motion Recognition

- Easy to use creating Virtual-Reality and control
- Content is controlled by motion recognition and mouse

#### Applied field

- Make use of various services and business models
- Virtual-reality based two-way communication service is available
  - “Multi-way Immersive Communications”



# II ▶ Live Edu Introduction

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## ▶▶ Mic control for concentrating Live Online-class



▶▶ Teacher can turn on/off students mic for noise control and 1:1 conversation

## II ▶ Live Edu Introduction

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### ▶▶ Make small group discussion during Live online-class

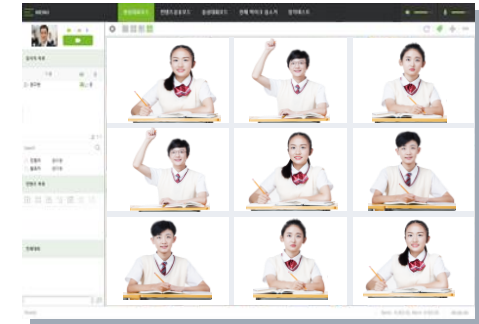


All students

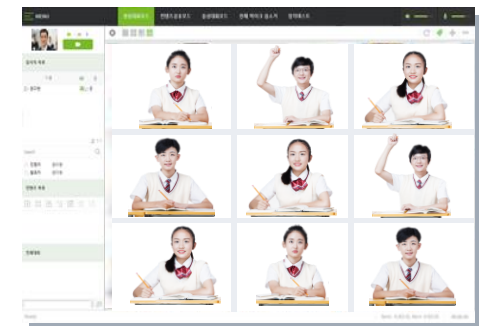
Group  
1

⋮

Group  
N



⋮



Automatically or manually  
divide students for small  
group discussion

Make highly immersive  
discussion

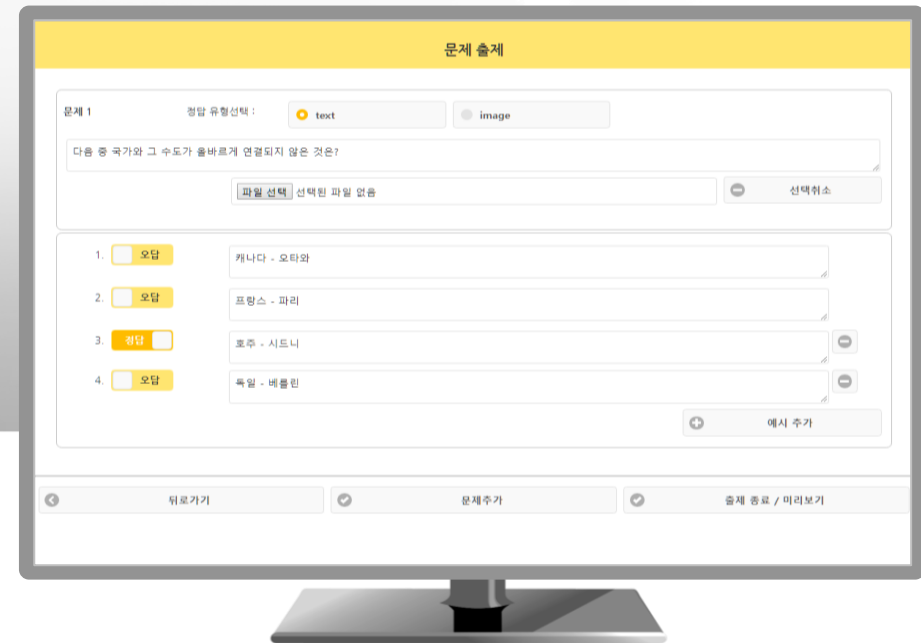
Each small group can be  
taken e-Test

Small group can be made as  
much as number of students,  
during Live online-class

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## ▶▶ Maximize learning effect with e-Test during Live Online-class

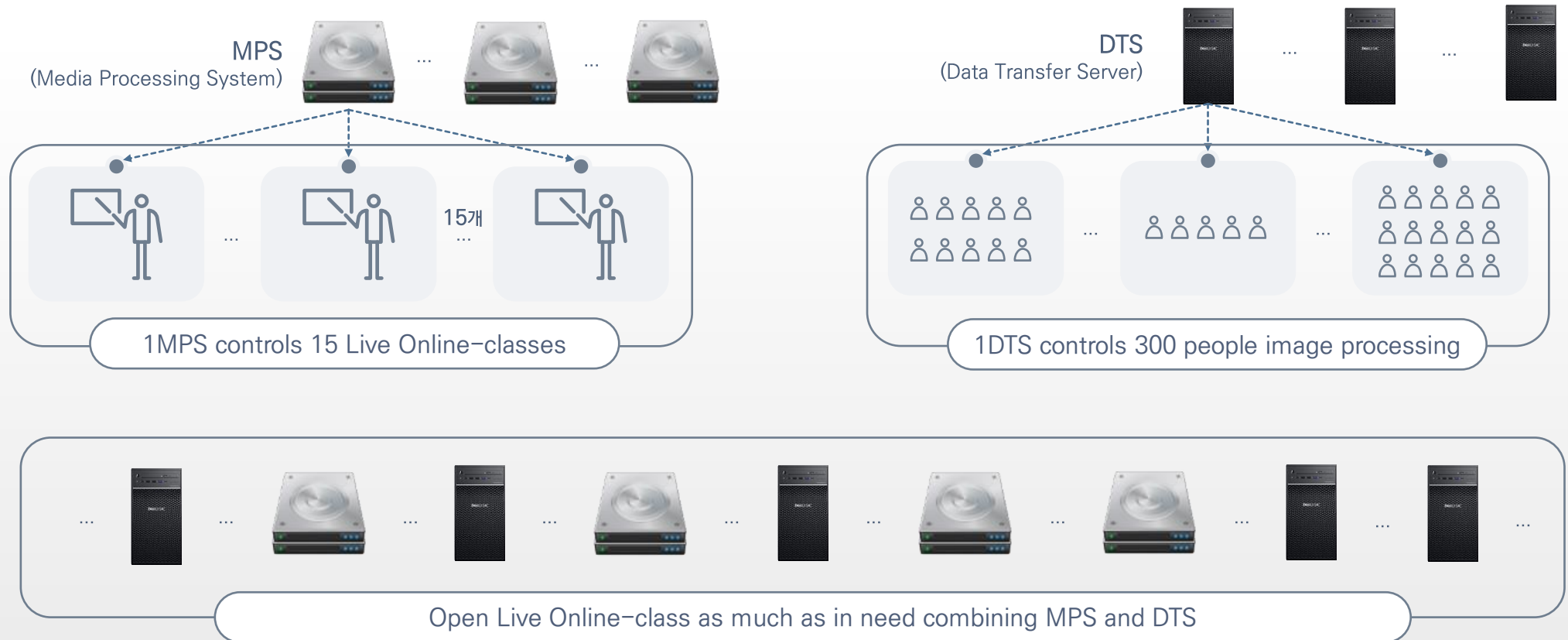


- ▶▶ Taking an exams and scoring during Live online-class
- ▶▶ Students academic performance data is managed by LMS (Learning Management System)

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## ▶▶ Open unlimited Live Online-classes



▶▶ Unlimited Live online-classes can be opened at the same time with adding MPS & DTS

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# Chapter

# IV

## Composition and use case





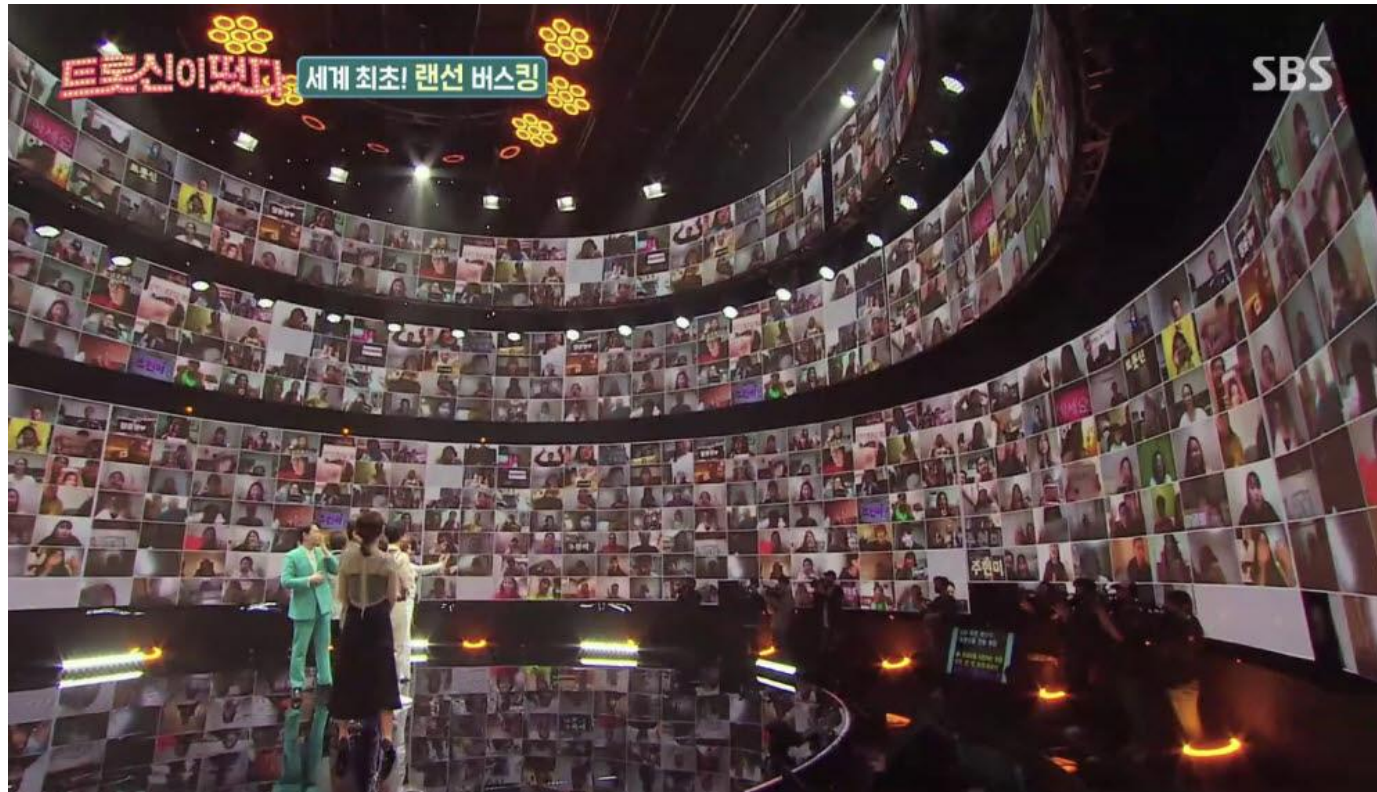
# IV ▶ Composition and use case

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## ▶▶ Use case (2) – Reality TV show program 'K-Trot in Town'



Source of data : SBS 'K-Trot in Town'

- ▶▶ Local and global trot fans are participated in the live TV show through PC and mobile at home
- ▶▶ The live tv show is delivered to more than 400 people in high quality video through multi-cast based network traffic management thchnology

# IV ▶ Composition and use case

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## ▶▶ Use Case (3) – New concept online concert 'Beyond LIVE'



Source of data : SM Entertainment 'Beyond The Future'

- ▶▶ Online-optimized, personalized performance concerts provided via SM Entertainment and Naver V Live
- ▶▶ Global concert audiences enjoy the Live Online Concert by participating in various events through interactive communication with stars



# Thank You.

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