

# Unleashing the Next Era of Social Entertainment Industry Growth with **RTC+AI**

PART 1

ZEGOCLOUD

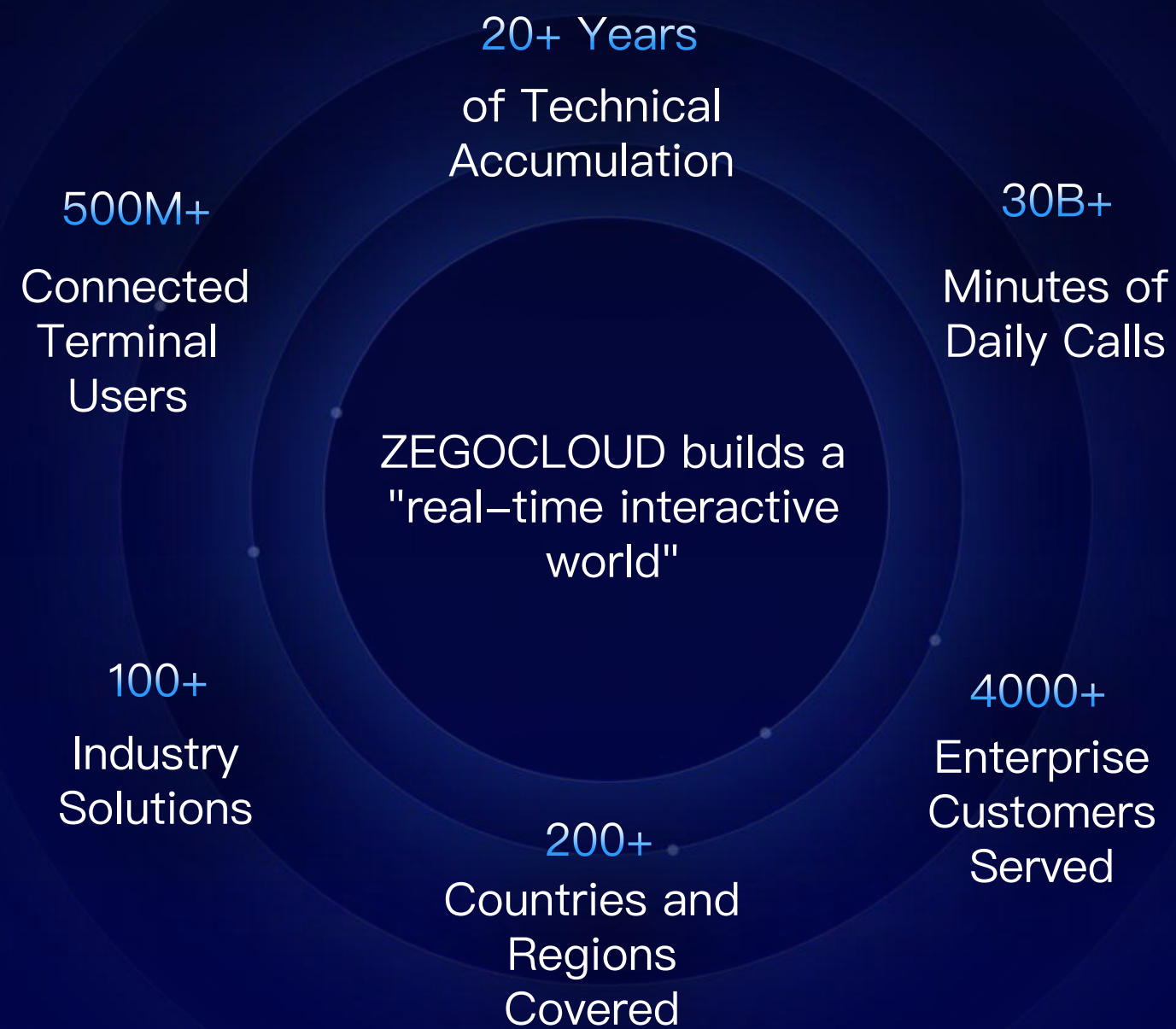
Your Preferred Partner for Social  
Entertainment Solutions



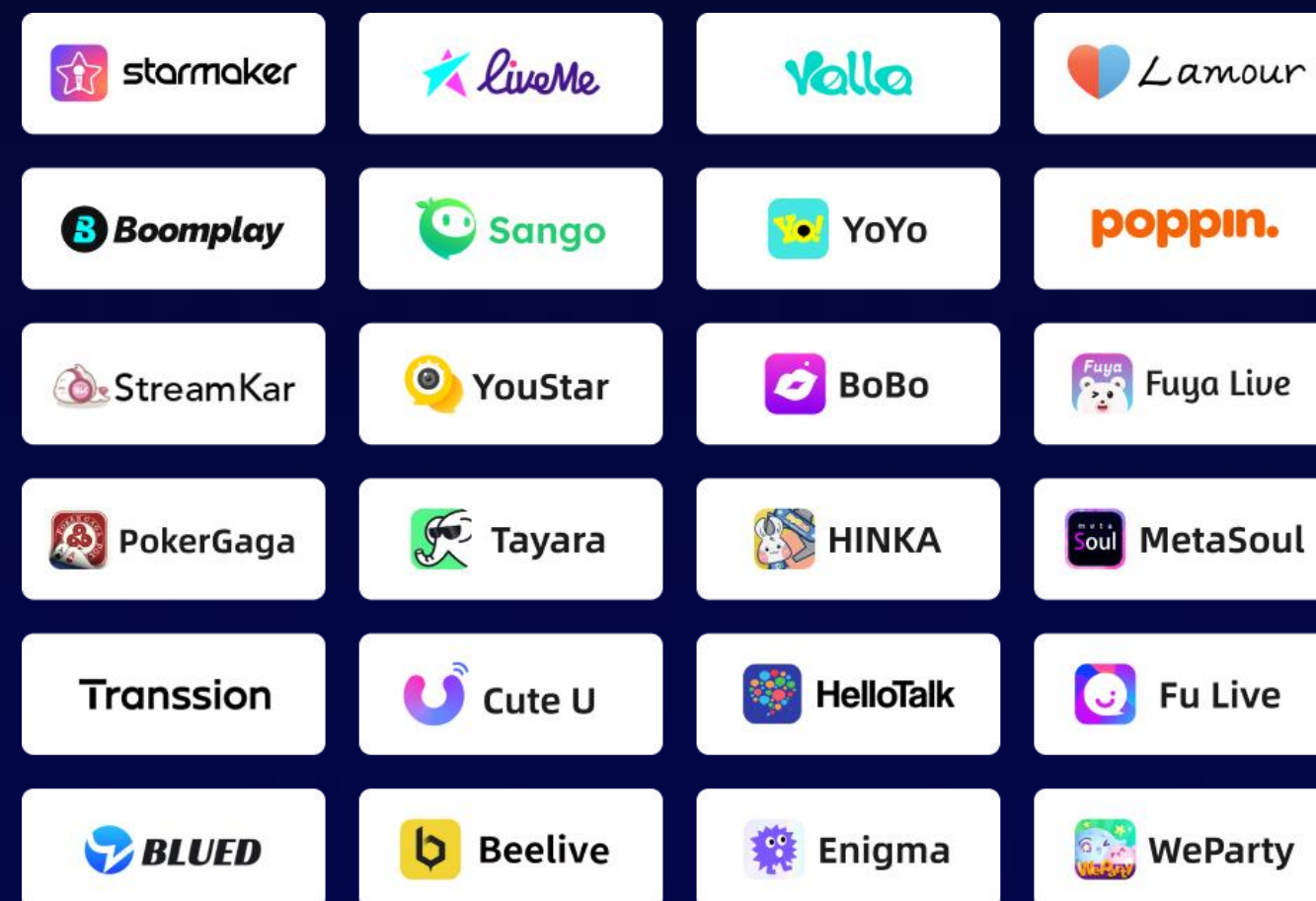
# ZEGOCLOUD – A leading Global Provider of Real-Time Interaction (RTI) Cloud Services

Founded in 2015, based on years of technical accumulation in the fields of RTC and AI, ZEGOCLOUD provides real-time audio and video PaaS cloud services and industry solutions.

We serve more than 4,000 global enterprise customers, including more than 700 higher education institutions and more than 200 financial and government organisations, with users in more than 200 countries and territories around the world.



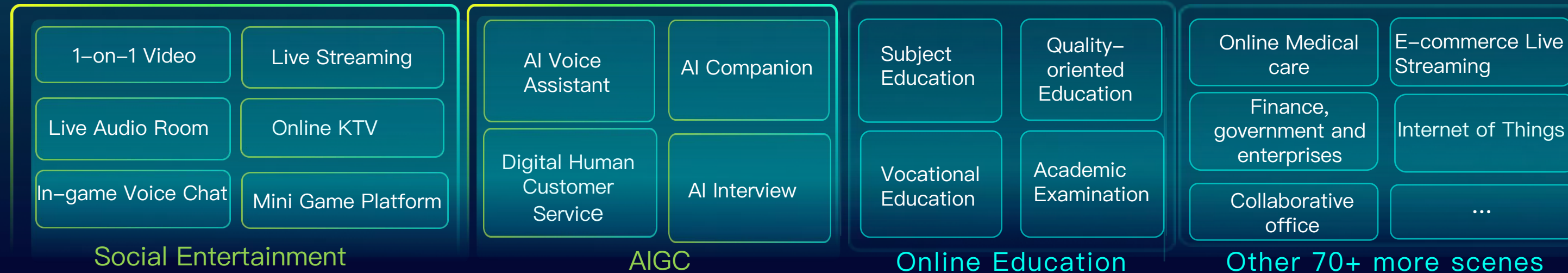
## Our Clients



# ZEGOCLOUD Product Introduction



## Industry solutions



## UIKits

## ZEGOCLOUD

### Real-Time Interactive Product Matrix



### Real-Time Interactive Technology Foundation-Technology Brand





# Key Characteristics and Scenarios of Hot Social Entertainment Regions

## North America

Short Video

1-on-1

- High market maturity, with active users and **strong payment ability**.
- Good payment habits

## Europe

Short Video

Audio

Gaming

- High market maturity, internet penetration rate **close to 90%**, and strong payment ability
- The average daily mobile device usage time has increased significantly in recent years

## Southeast Asia / South Asia

Live Streaming

Short Video

Voice

- Massive population base, with over 440 million local internet users
- Internet penetration rate **exceeds 75%**, with room for growth in social networks

## Latin America

Short Video

1-on-1

- Abundant demographic dividend, **extremely long daily mobile device usage time**
- Taking Brazil as an example: its mobile users spend over 10 hours per day on the internet, with huge development potential

## Middle East and North Africa

Audio

Live Streaming

Gaming

- Internet penetration rate nearing 70%, higher than the global average
- Local users have extremely high demand for online social and entertainment, with a massive number of internet top users
- The Gulf Cooperation Council (GCC) countries have **extremely strong consumer purchasing power**



PART 2

High-quality **Real-time Audio and Video**  
Empowering Business Growth



# Four Major Scenario Solutions

1-on-1 Video



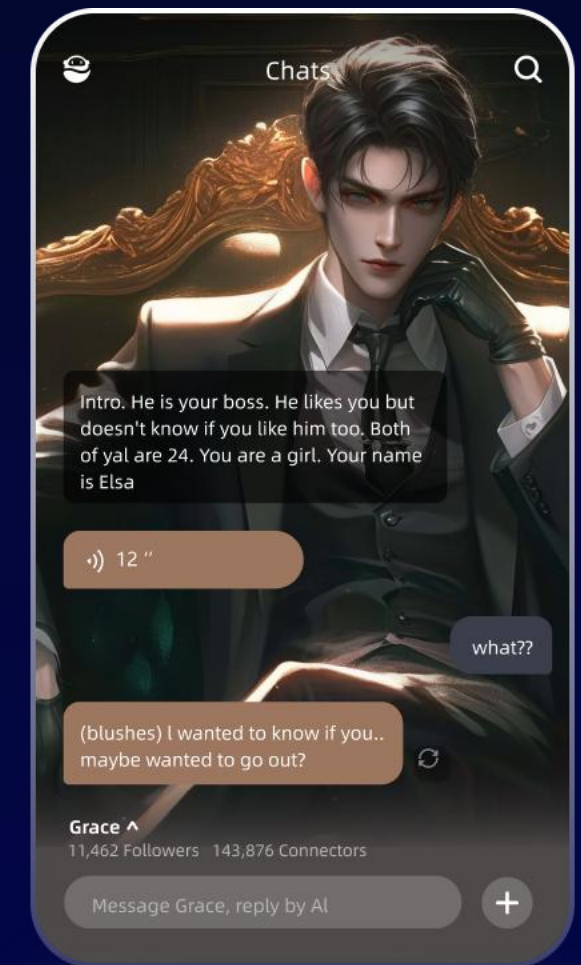
Live Audio Room



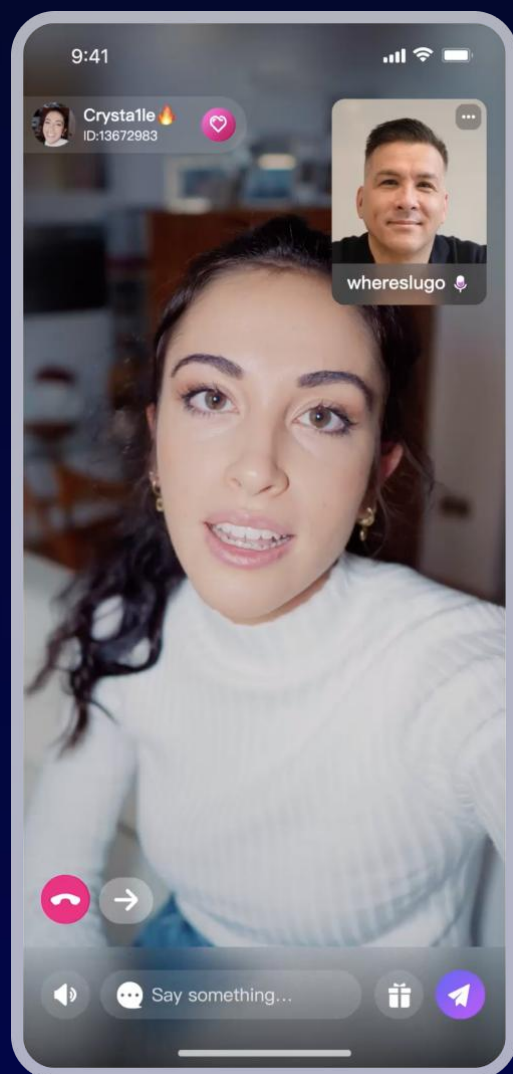
Live Streaming



AIGC



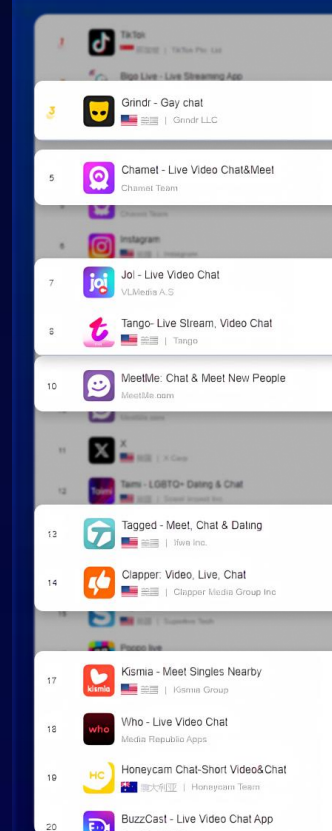
# 1-on-1 Video Dating Has Become a Common Revenue Driver



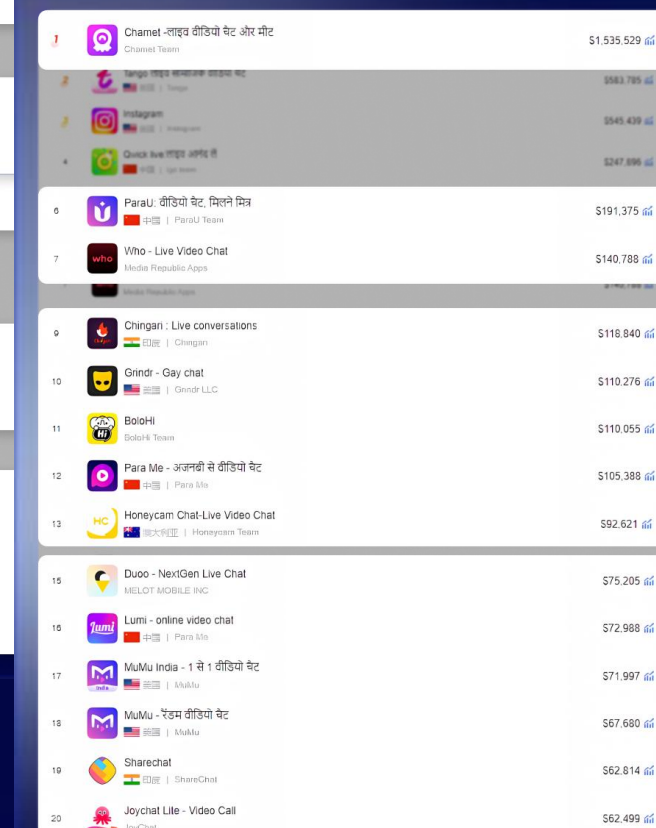
## Revenue share of 1-on-1 video apps in top 100

<b>51%</b>	Middle East	UAE Saudi Arabia, Iraq, Kuwait, etc.
<b>47%</b>	Southeast Asia	Philippines, Indonesia, Malaysia, Singapore, etc.
<b>40%</b>	Western Europe and North America	The United States, Germany, France, the United Kingdom, etc.
<b>47%</b>	Latin America:	Mexico, Chile, Argentina, Brazil, etc.

### 1-on-1 accounts for 55% of the US rankings



### 1-on-1 accounts for 70% of the Indian list



Data source:  
Diandian Data.



# Four Major Pain Points of 1-on-1 Video Directly Affecting Business Revenue



## Long launch cycle

Long development  
time

Long review  
cycles

Listing takes more than

>30 days



## Low video connection rate

Traditional solutions have  
only a 70% connection rate  
within 2 seconds

Business order volume

-30%



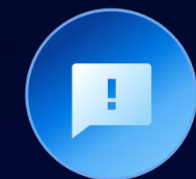
## High call stuttering rate

Poor network

Varying  
device  
models

Call stuttering rate

>10%



## High rate of cost complaints

Multiterminal  
asynchrony

Inaccurate  
timing

Cost complaint rate

>8%

# 1-on-1 Video

## Dramatically Shortens Time-to Market

### Pain Points of Listing

- 1 Challenges in App Store Placement and Lengthy Review Cycles
- 2 Platform commission rates as high as 30%
- 3 High user acquisition costs and high download barriers

### Web-based Solution

- Cross-platform operation, no need for separate development of each platform, saving development costs
- Convenient for users to access, no need to download the app to experience the service
- Instant Access to Services Without App Downloads
- Swift Updates and On-Demand Feature Deployment
- SEO-friendly, can be indexed by search engines to increase exposure

### UIKit Solution

- Best practices for 1-on-1 Prebuilt
- No need to integrate multiple SDKs
- 95%+ offline push success rate.
- 50+ Customizable UI Components



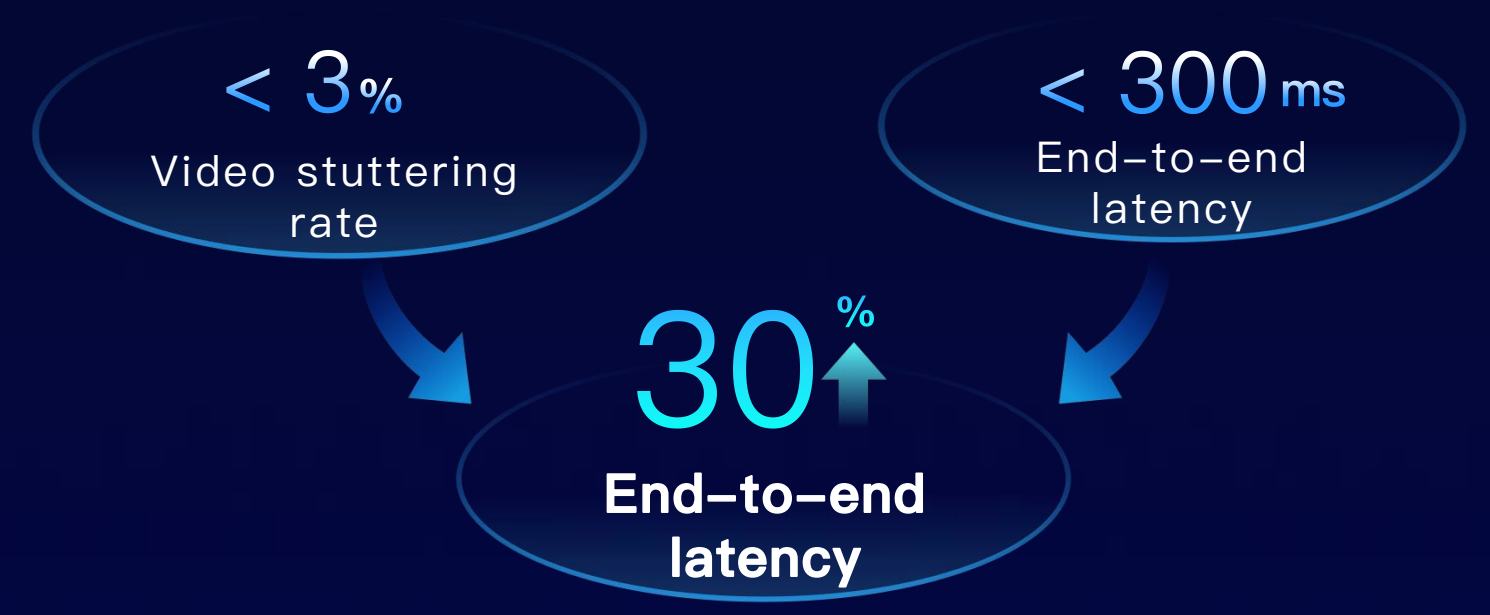
# Solutions for 1-on-1 TTFF and Enhanced Smoothness

## Advantage 1



- Parallel signaling and media
- Nearby access
- Pre-scheduling strategy
- Caching strategy
- 0-RTT connection establishment

## Advantage 2



- AVERTP proprietary protocol weak network flow control
- Targeted encoding optimizations
- Massive ordered data network MSDN
- Intelligent routing
- 500+ global nodes coverage

# 1-on-1 Video High-Precision Billing Solution

## Issues

Being Billed in Advance 🙄

Fake Disconnections 🙄

## Pain Points

Poor Synchronization 🙄

High Development Cost for Billing Systems 🙄

## Solution



- Billing Duration Across Three Platforms
- NTP synchronization



- Abnormal situation handling



- Atomic-level backend callbacks
- Customized billing

# Current Status of Live Audio Room Industry

## Regional Characteristics

## Infrastructure Conditions

## Business Model Insights

### Southeast Asia

- Strong demand for social entertainment and networking
- Lower user payment levels, but long online duration
- Typically a high DAU, low ARPU revenue model

- Internet penetration rate is above average
- Network stability and speed can be improved
- Android dominants, with a large proportion of entry-level smartphones

- Social networking for young users, with interactive features like gaming gang up and online karaoke, to drive monetization
- Key concerns are weak network resistance and low power consumption

### The Gulf Cooperation Council (GCC)

- The market for live audio rooms without video is quite large
- Users have a high willingness to pay
- Typically a low DAU, high ARPU revenue model

- High internet penetration rate
- Stable and fast network speeds
- Nearly half iOS market share, overall stronger device performance

- The product requires a diverse range of gameplay and advanced, mature interactive features
- There is high market saturation, so the solution needs to have differentiated advantages or innovative capabilities



# AI Audio Engine to Deliver an Exceptional Voice Chat Experience

Crystal clear, pure voice quality

## AI ANS

- 6 major scenarios
- 400+ noise suppression types

- Room reverberation
- Echoes elimination

## AI AEC

- Call scenarios 100% echo cancellation

- Karaoke external playback
- Vocal protection

## AGC

- Far-field and near-field audio capture
- Volume balancing

- Smooth peak limiting
- Natural volume changes

Exceptional Voice Quality Restoration

10ms latency, low power consumption, and no lag or overheating for entry-level smartphones

# AI Audio Engine to Deliver an Exceptional Voice Chat Experience

Ultra-smooth, high-quality call performance

Region/Key Indicators	Success Rate of Stream Publishing	Success Rate of Stream Playing	Audio Stutter Rate	End-to-End Latency
East Asia, Southeast Asia	99.8%	99.8%	1%	200ms
India, Middle East (Saudi Arabia, UAE), North America, Europe	99.5%	99.5%	3%	300ms
Latin America, Africa, Middle East (other countries)	98%	98%	5%	400ms



# Live Audio Room + KTV Game Solution

High user engagement for real-time karaoke features – up to **70%** of users actively singing, with a **20%** increase in session duration

**60ms** end-to-end latency for chorus experience

**1 ms** perfect synchronization between voice and background accompaniment

**50ms** ultra-low latency for ear return

Support for **30,000+** device models across different platforms

Multi-language support, with a song library of over **100,000** tracks

Indonesia

한국인 Korean

Tiếng Việt Vietnamese

English

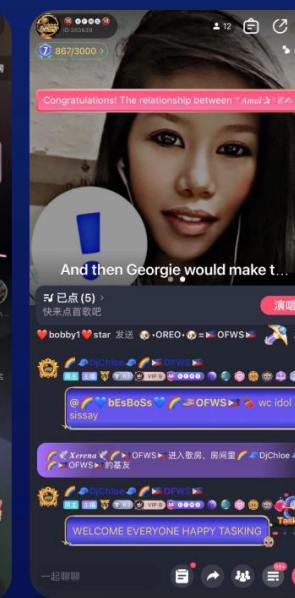
Solo, Round Robin, Choir, OMO Offline Karaoke Room, and other game modes are available



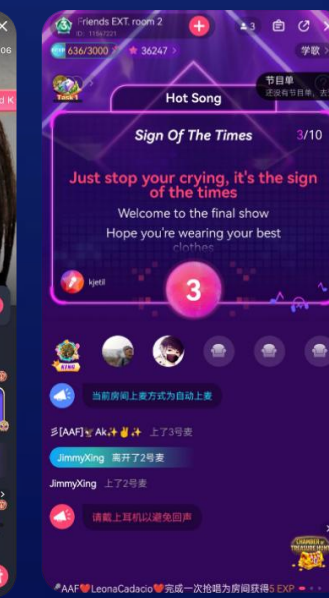
Real-Time Chorus



Handoff Singing



Solo



Competitive Singing

# Live Audio Room + AI Voice Changer New Gameplay

Paid voice transformations, virtual gifts and tips, custom voice/sound packs, VIP subscriptions, experience cards, etc.

Party/  
Networking

Emotional  
Radio

Live Action Role Playing  
(LARP) games

## Gameplay Expansion

Enhance user presence and participation with distinctive, high-quality voice profiles in themed rooms

Integrate voice customization deeper into role-playing and character expression

Improve fun and interactivity with voice-changing interactive gifts

Enable the use of anonymous "voice masks" to facilitate new connections



## Advantages

Perfect recreation of target voice and prosody

Ultra-low latency voice transformation

5 lines of code for easy access

An extensive database of over 100 professional-quality human voice recordings



# Addressing Challenges in Live Streaming Scenarios

Current Situation

## Regional Characteristics

### Gulf Cooperation Council (GCC)

- Male streamers dominate, with a focus on PK (player-versus-player) gameplay
- Top 5% of paying users drive over 90% of revenue

### Southeast Asia

- Popularity of beauty-focused live streams
- Combination of live streaming and mini-games to drive user revenue

## Infrastructure Challenges

### User Equipment

- High proportion of low-end and mid-range devices
- Lagging and overheating

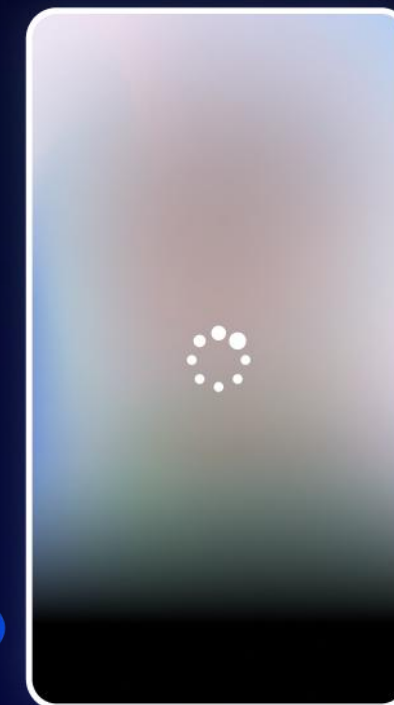
### Livestream Environment

- Poor speaker audio quality
- Dim lighting

### Network Environment

- Limited 4G coverage
- Network speed restrictions

Bringing pain points



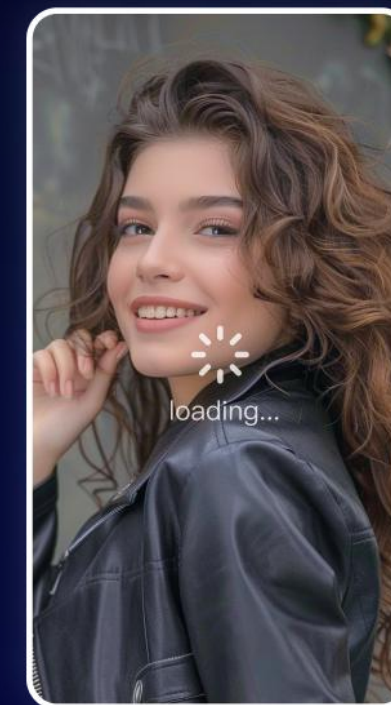
### Slow Switxching Between Streams

- Long First Frame Load Time
- Slow Room Entry



### Poor Video Quality

- Blurry Video Imagery
- Dull Color Reproduction



### High Stuttering Rate

- Resulting in Unsatisfactory User Viewing Experience



## Ideal State for Live Streaming Users

Low Latency

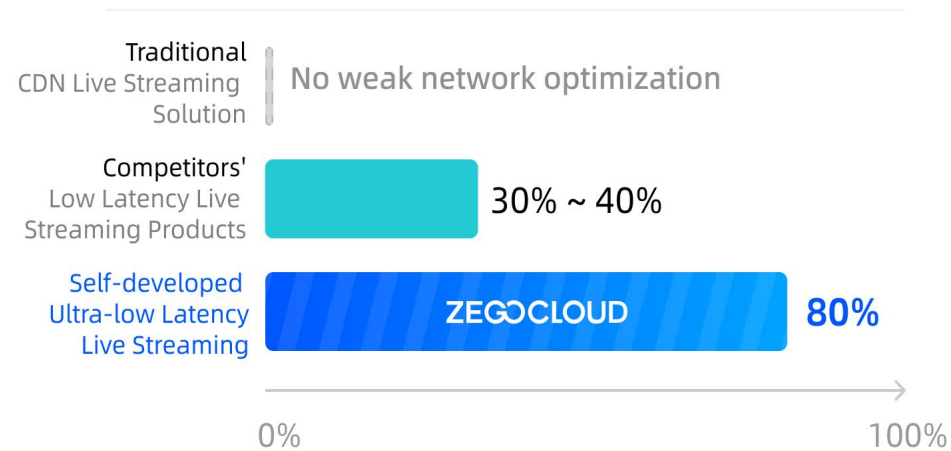
Instant Start

Smooth Playback

High Definition Visuals

# High Quality, Ultra Low Latency Live Streaming

## Comparison of Weak Network Resistance Capabilities



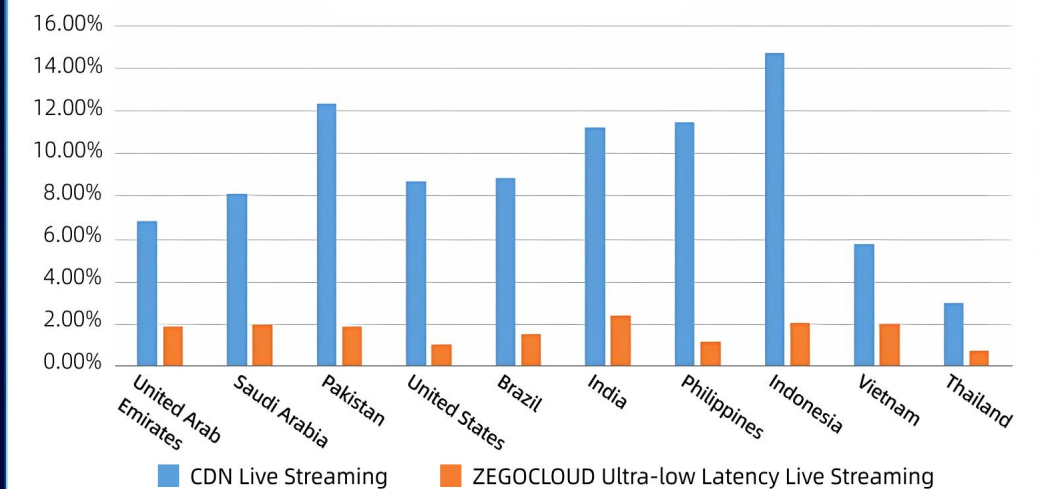
## Weak Network Resistance Capabilities Significantly Improved

Equipped with the strongest network resistance capabilities, delivering clearer and smoother video quality.



## Millisecond-level ultra-low latency

End-to-end latency as low as 600ms, stronger live interactivity, and more timely feedback.



## Significant Reduction in Stuttering Rate

Compared to traditional CDN live streaming, ZEGOCLOUD's ultra-low latency live streaming provides more timely feedback. Stuttering rate reduced by 75%+



# Optimized Live stream Quality Boosts Average Viewer Duration by >6%

## User Negative Feedback

Too dark 🌑

Terrible image quality 🤯

Can't even see the host's face

The resolution is too high, the live stream is so laggy 🙄

The image is too blurry 🙄

Colors are too distorted 🤪

Best Practices

Delivering a high-definition, natural, and smooth viewing experience  
Overcoming device and network limitations

Low-light Enhancement

Color Enhancement

Super-resolution

End-to-End H.265 Compression

Cloud-based High-Definition Low-Bitrate Encoding

...

Before

After



# Regional Compliance Policies and Content Guidelines

Customized content safety and compliance standards/recommendations provided for **13** popular regions/countries

**Current Situation**

**1** Varying regulations across different countries

**2** Numerous substantive laws and regulations

**3** User content risks triggering compliance issues due to complex regulations

Noncompliance risks  
platform bans or removal  
from app stores

**App Store Listing Compliance**

Universal compliance strategies interpretation

App categorization strategy interpretation

Reasons for App rejection/removal and policy update interpretation

**In-Product Content Compliance**

Regulations regarding religious, sexually explicit, and violent content

Compliance evaluation of in-product text, UI, and other Content

Interpretation of content moderation policies

**Data Privacy Compliance and Security**

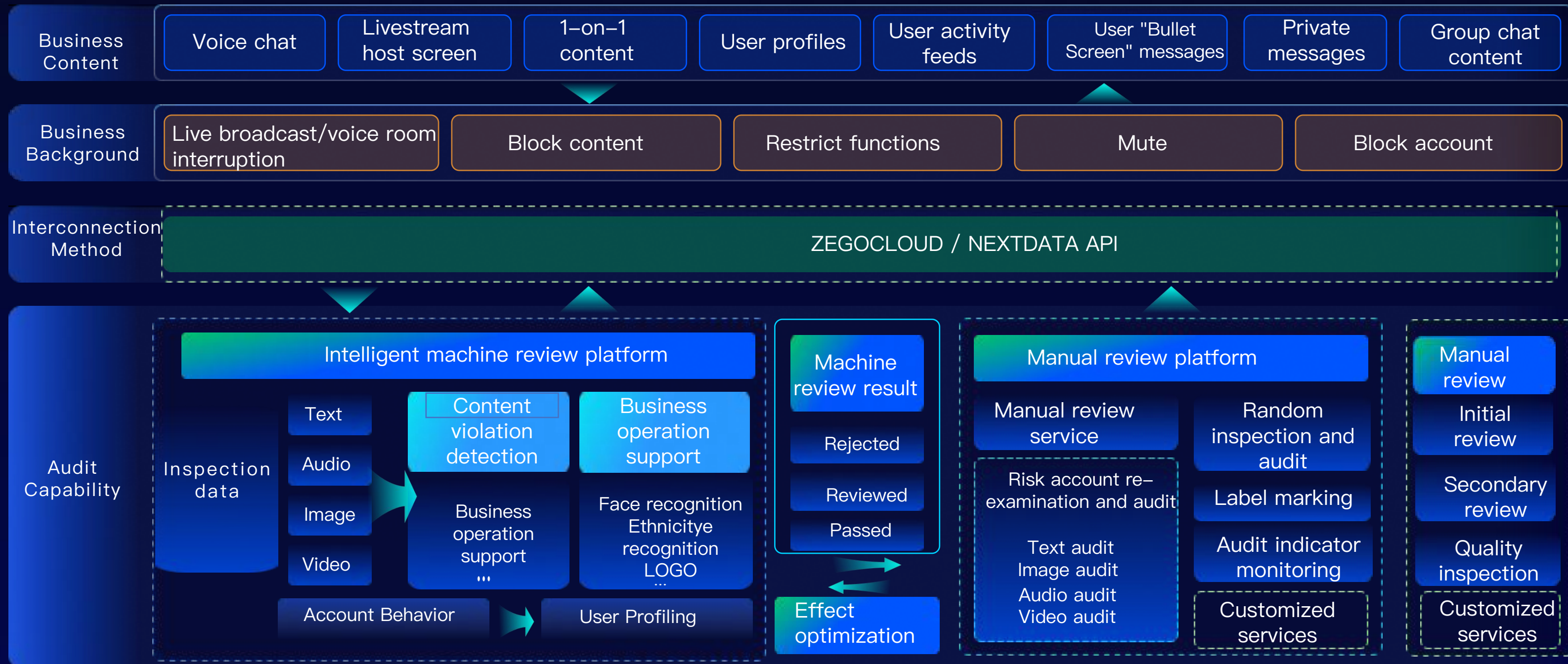
Interpretation of user agreement/license policies

Interpretation of privacy policies

Interpretation of cookie policies



# A One-Stop, Full-Scenario Moderation Solution to Support Business Growth





PART 3

RTC + AI

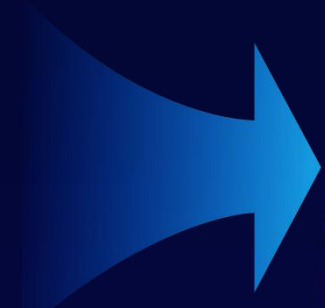
New Scenarios, New Future

# AI Companion: Social Innovation Amidst the Pandemic Trend

In 2024, the growth of AI companion products has been **explosive**

Data shows that in March, the total visits to AI companion products exceeded 300 million, a **16.82%** increase over the previous month. Visit volumes are second only to AI assistants, AI search engines, and AI design tools.

Source Data: [aicpb.com](http://aicpb.com)

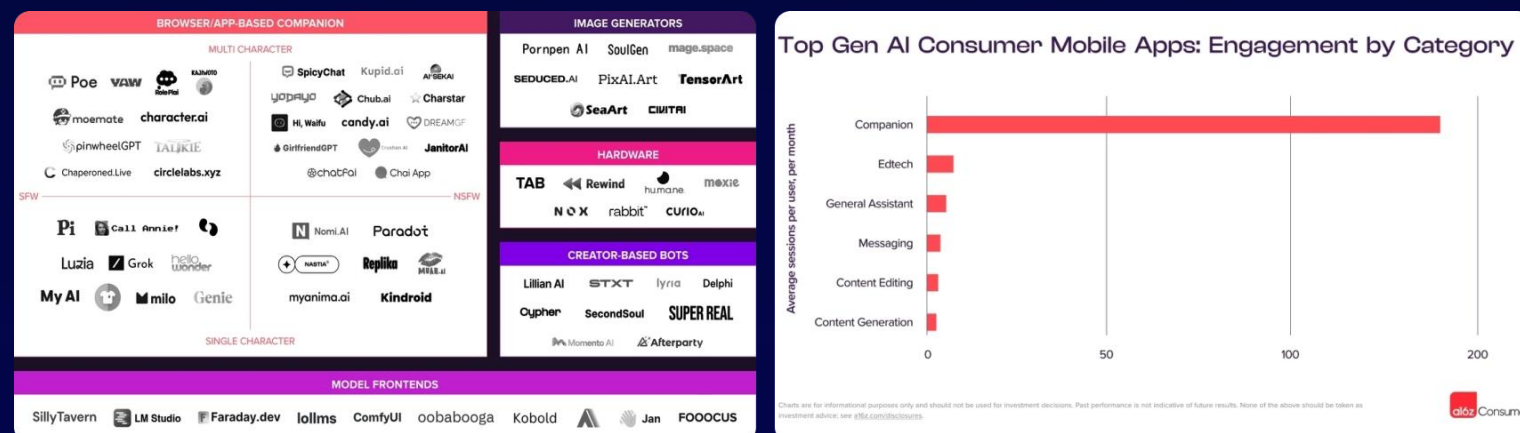


**1** AI companion scenarios are becoming increasingly popular, bringing generative AI into consumers' **everyday lives**

**2** Young user base, beloved by **Generation Z users**

**3** Internet celebrities are willing to create **AI avatars**

**4** The upgrade of GPT-4o and the in-depth development of multimodality bring AI closer to "real people" and fully meet people's various social, emotional, and companion needs

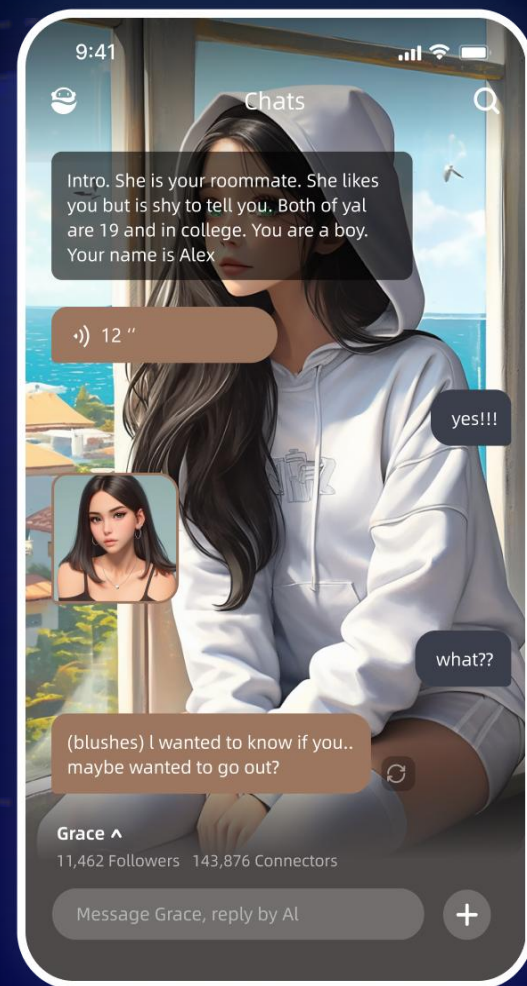




# How to Build a Seamless, Interactive AI Companion

## IM (Instant Messaging)

### Interaction



AI Image Generation

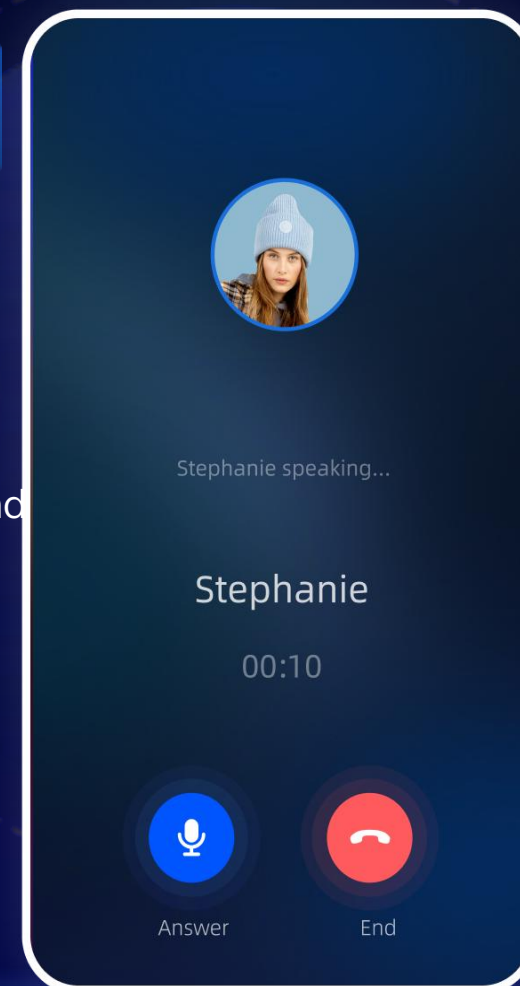
Flexible Use of Large Language Models in Multiple Languages

Support for Text, Images, Audio Messages, and Multimodal Interaction

Content Moderation

## Voice Chat

### Interaction



Voice Activity Detection (VAD)

Support for Diverse and Naturalistic Voices

Real-Time Voice Control  
Ability to Interrupt at Any Time

Ultra-Low Latency Interactive Experience

## Video Interaction



Lip-Sync and Voiceover Synchronization, Natural Expressions

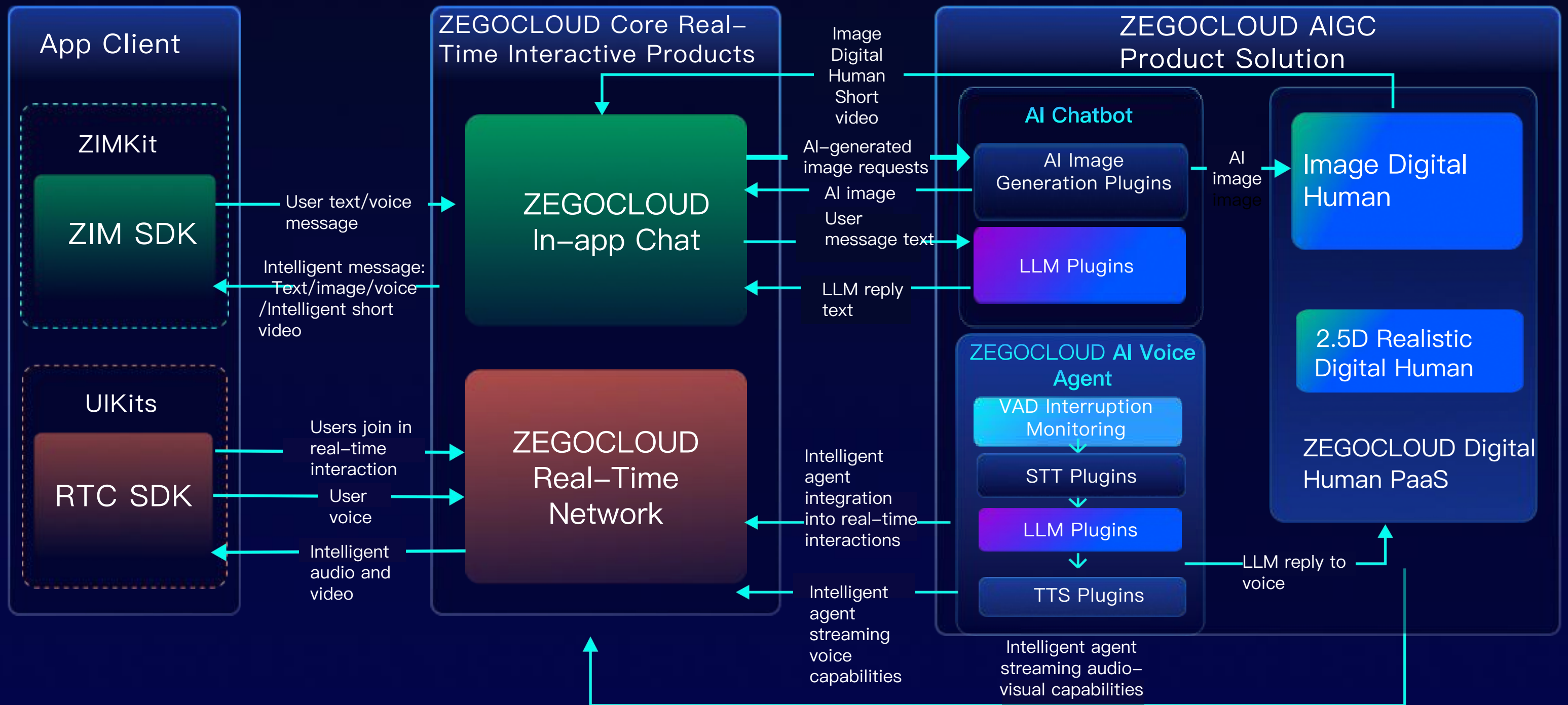
Multi-Turn Dialogue Memory

Customizable Avatar Appearance

Low Latency, Real-Time Streaming Interaction



# ZEGOCLOUD AI Companion Solution Architecture



# Virtual Interaction Made Real

Find ZEGOCLOUD on [www.zegocloud.com](http://www.zegocloud.com)