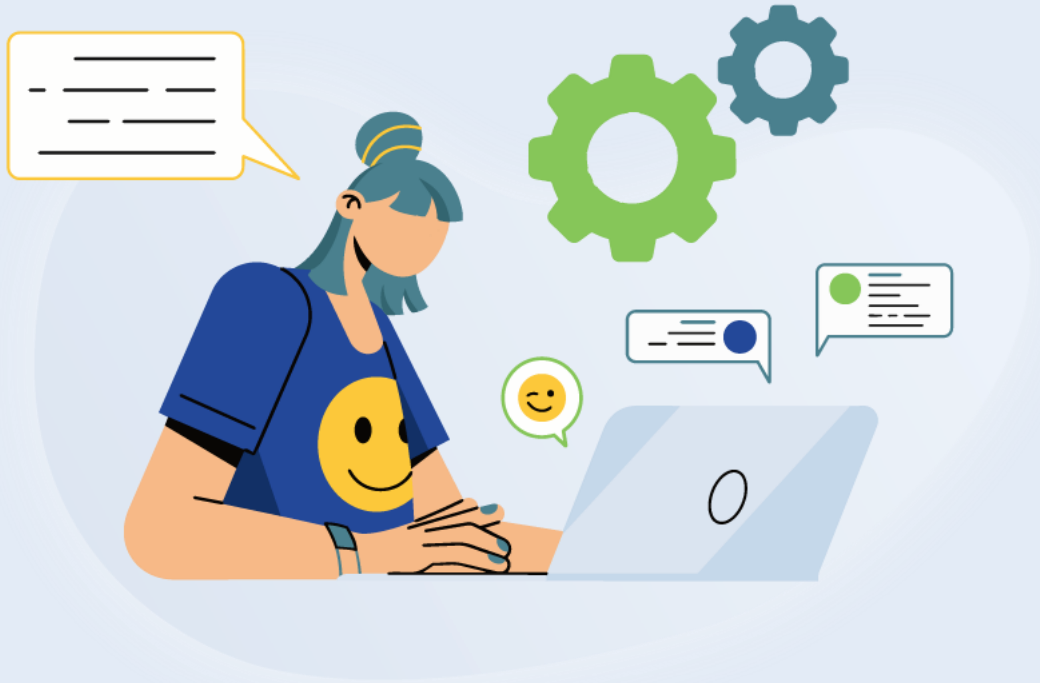
**WORKSHOP**

EU-China Workshop on E-Accessibility

# vivo's On-Device Intelligence and Standardization: Empowering People with Disabilities



Yazhong WANG
Strategy Development Specialist

Organized by:

indico GLOBAL

In collaboration with:

European Commission

EFTA

欧盟驻华标准化专家项目
Seconded European Standardization Expert in China

Funded by the European Union

©Indico Global 2024-2026

# 31 Years in Communications, Four Long-Term Strategic Tracks

## Widely Recognized

Global Monthly Active Users
**600M+**

National S&T Progress Award · First Prize

CPC Central Committee & State Council

Countries and Regions
**60+**

Most Valuable Chinese Brand Top 50

2025 Kantar BrandZ Top 100 Chinese Brands

Global Annual Shipments
**100M+**

Chinese Global Brand Top 20

2025 Kantar BrandZ Top 50 Chinese Global Brands




### Global Talent Network

Talent from world-renowned design institutions.

### One in a Thousand

Nearly 1,000 prototype iterations per product.




vivo | ZEISS

Global Imaging Partner

### vivo BlueImage

Self-developed sensors, algorithms and imaging chips.

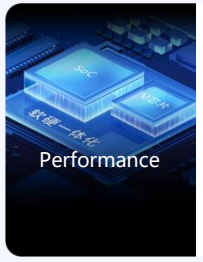



### Self-Developed BlueLM

Among China's first smartphone AI foundation models.

### Self-Developed BlueOS

Industry's first OS fully written in Rust.




### vivo BlueChip Technology

End-to-end chip innovation with industry-leading benchmark performance.*

### vivo BlueVolt Battery System

CQC-certified all-day battery life.

vivo

# Tech Innovation

Benefiting Everyone

# Humanistic Care

Connecting to a Bright Future



## Hearing Impairment

- Completely Deaf
- Hearing Damage
- Unable to hear sounds from a certain frequency
- …



## Visual Impairment

- Completely Blind
- Low Vision
- Red-Green Color Blindness
- Total Color Blindness
- …



## Physical Disability

- Upper Limb Disability
- Parkinson's
- ALS (Amyotrophic Lateral Sclerosis)
- …



## The Elderly

- Combination of the previously mentioned physiological impairments
- Cognitive Impairment
- …

# Insights into the Hearing-impaired Community

“Blindness separates us from things, but deafness separates us from people. ” - Helen Keller



Difficulties in Communication



Difficulties in Perceiving Surrounding Enviornment

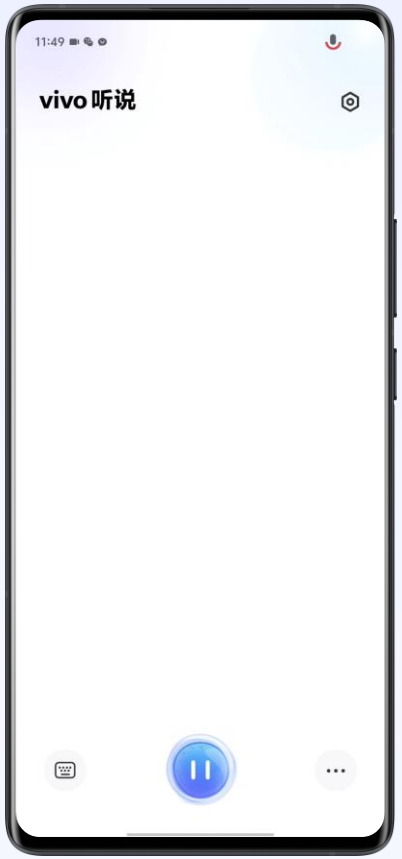


Difficulties with Audio and Video Subtitles

# vivo Voice and Barrier-free Call

vivo Voice and Barrier-free Call enhance both online and offline communication capabilities, allowing for free expression.

## vivo Voice




Voice and Text Conversion

## Barrier-free Call







Answer/Make Calls | WeChat Video

# Sound Recognition

Sound Recognition can identify certain important sounds that you might inadvertently overlook. With the help of intelligent technology on the device side, it sends notifications to you when the sounds are detected, caring for your safety and bringing convenience to your life.

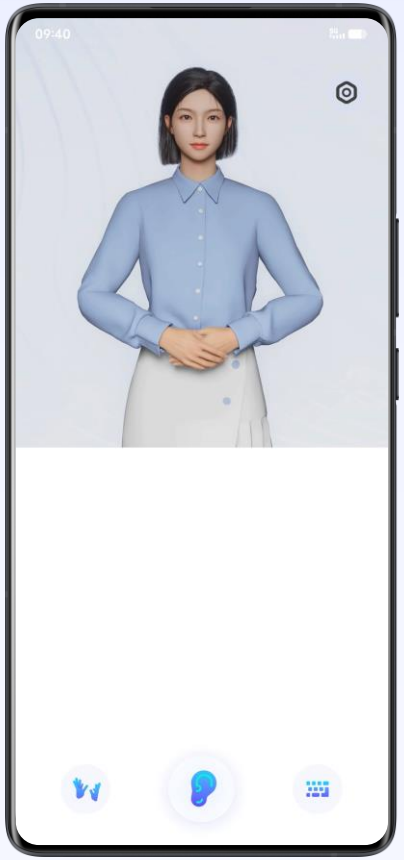



Baby‘s Cry | Car Horn | Smoke Alarm Sound

# Sign Language Recognition Capability For Building a Friendly Communication Environment




Sign Language Recognition




Sign Language Synthesis

**Debut in Mobile Industry**

Sign Language Recognition Technology

**Sign Language Recognition 1200+ Words**

Chinese Level Four Proficiency

**80%**

Recognition Accuracy Rate

**Sign Language Synthesis 8000+ Words**

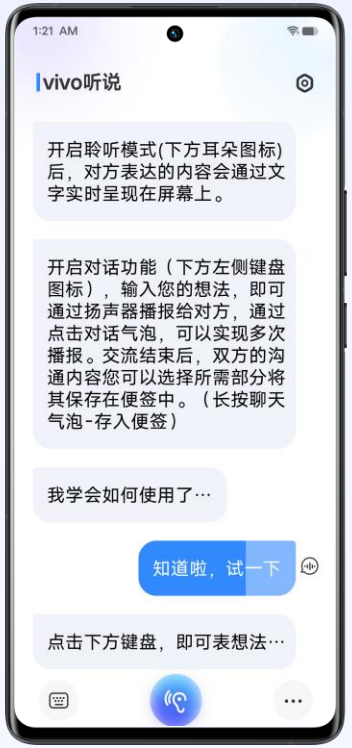
Chinese Standard Sign Language Dictionary

**Sign Language Recognition Capability**

JoviKit

## vivo Voice

Face-to-face communication without barriers




## Barrier-free Call

Unhindered communication on social platforms



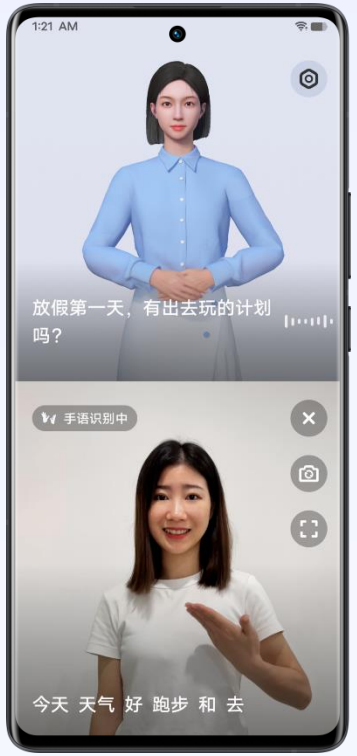

## Sound Recognition

Recognize important ambient sounds around



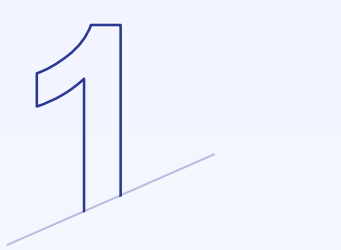

## Sign Language Translator

Conversion between voice, text, and sign language



# Insights into the Visual-impaired Community

"Blindness separates us from things, but deafness separates us from people. " - Helen Keller



Difficulties in Using Mobile Phones



Difficulties in Independent Living



Difficulties in Travelling



Difficulties in Learning and Employment

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# vivo Score Reading

## vivo Score Reading

Soar on the wings of dreams

- Free Scores
- Audio-to-Score Conversion
- Score Reading

Industry's debut

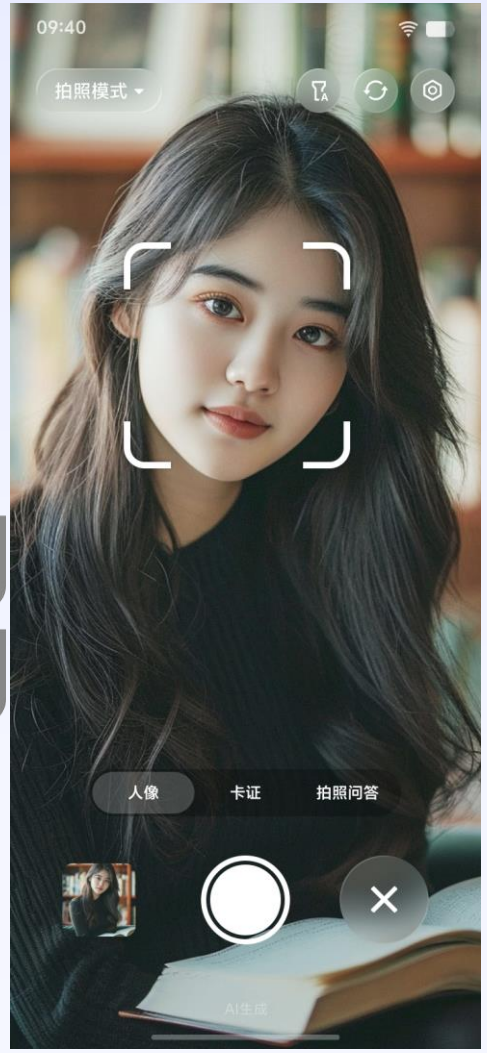


Description of the video

Play button Pause (music is playing, ends at 4.5s) First measure, treble symbol, whole rest... (music score reading)

# vivo Sight




Real-time recognition of text, cards, codes, and environment

Voice commands Supports items

Capture completely, capture correctly, take good portraits and document cards.

Person Memory，intelligent memory capabilities



# vivo's Awards Winning at Innovate for Impact Use Case



Certicate of Recognition

This certificate is awarded to

**vivo Mobile Communication Co., Ltd.**

**China**

for the use case titled "**vivo's Technology for all: bridging the accessibility gap**" in the AI for Good Innovate for Impact hosted by the International Telecommunication Union (ITU). Your hard work, dedication, and achievement is well recognized.

Seizo Onoe

Director of ITU Telecommunication Standardization Bureau

4 July 2024
Shanghai China

AI for Good Global Summit

vivo's Technology for All: Bridging the Accessibility Gap was selected as Innovate for Impact Use Case in 2024.



AI for Good Global Summit

**WINNER CERTIFICATE**

Innovate for Impact Use case

This certificate is proudly awarded to:

*vivo, China*

Awarded for your use case titled "On-Device Intelligence Empowers People with Disabilities and Smart Interaction Scenarios" under the category of Accessibility.

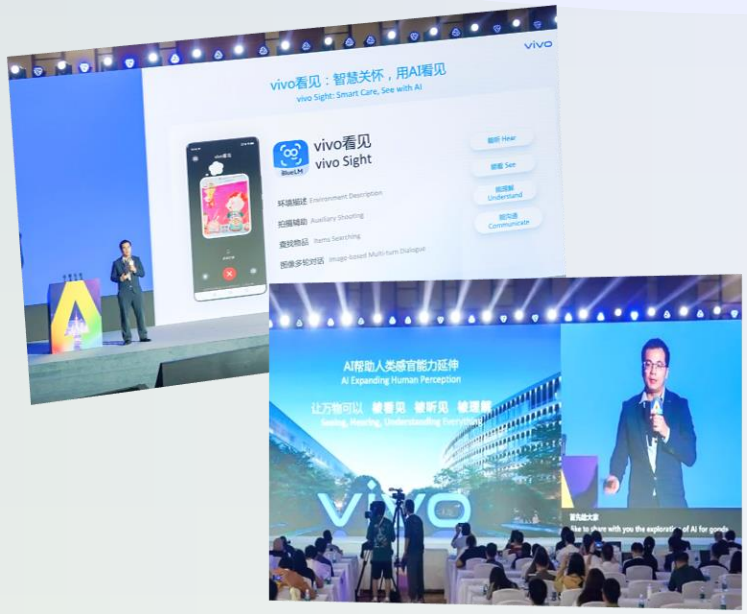
Seizo Onoe

**Seizo Onoe**
Director, Telecommunication Standardization Bureau, International Telecommunication Union

"On-Device Intelligence Empowers People with Disabilities and Smart Interaction Scenarios " wins Innovate for Impact Use Case Award at the 2025 ITU AI for Good Global Summit.

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# vivo's Actively Participates in AI for Good Initiatives













**2024.7**

vivo delivered a keynote speech titled “Technology Illuminating a Brighter Future” at the 2024 WAIC "AI for Good: Innovate for Impact “ forum

**2024.11**

vivo shares the LLM and accessibility insights in ITU Academy Training

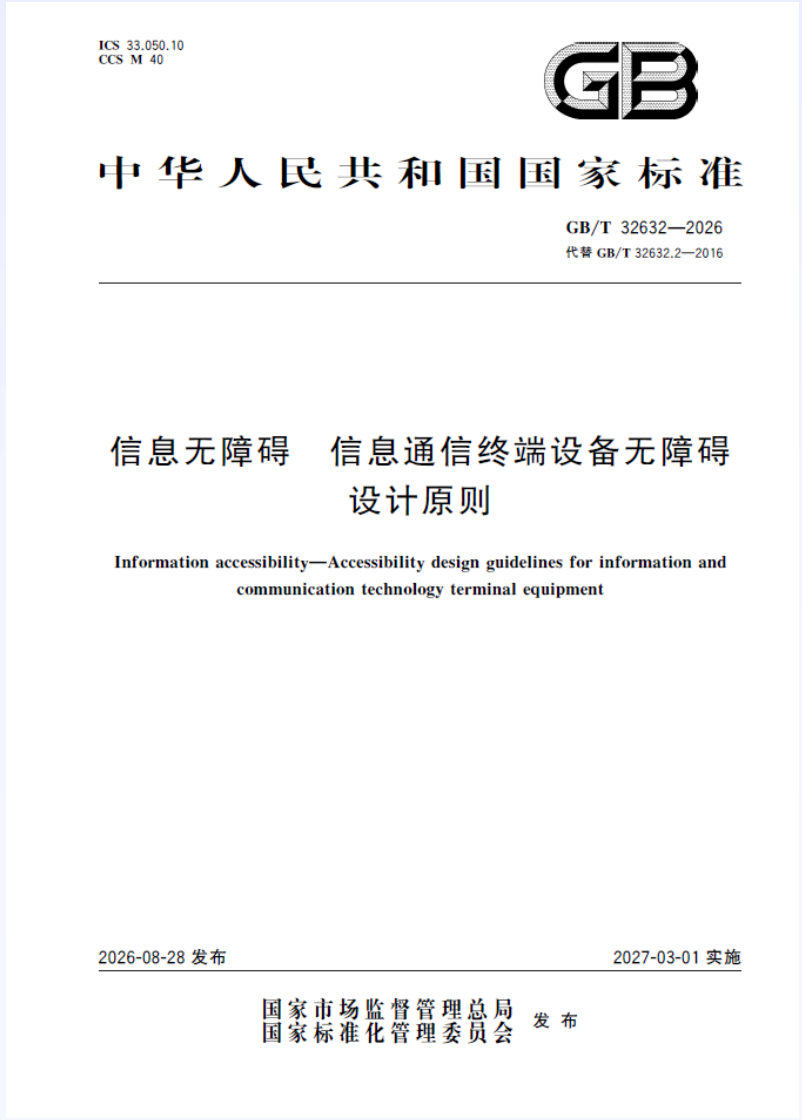
**2025.1**

vivo shares practices and engagement in ITU AI for Good initiative at ITU SG21 workshop

**2025.7**

vivo shares its vision of technology for good in AI for Good Global Summit in Geneva

# vivo Contribution to GB/T 32632-2026



ICS 33.050.10
CCS M 40

中华人民共和国国家标准

GB/T 32632—2026
代替 GB/T 32632.2—2016

信息无障碍　信息通信终端设备无障碍设计原则

Information accessibility—Accessibility design guidelines for information and communication technology terminal equipment

2026-08-28 发布　　2027-03-01 实施

国家市场监督管理总局
国家标准化管理委员会　发布

## Reference to International Standards

**Core requirements aligned with ETSI EN 301 549 (Accessibility requirements for ICT products and services):**

- General hardware accessibility (visual/auditory/operational)
- Global assistive technology compatibility
- Universal interface and peripheral support

## China-Specific Enhancements

**Localized requirements for Chinese market users:**

- Chinese accessibility: screen reader/dialect input optimization
- Age-friendly design: senior mode, one-key SOS, local scenario support
- Local compliance: public service terminals, emergency call support

# vivo Contribution to GB/T 47517-2026

## 1. Severe Shortage of Qualified Sign Language Interpreters

- China has 20.54 million deaf/hearing-impaired people
- Estimated <10,000 qualified professional interpreters nationwide

## 2. Lack of Unified Quality Standards for Digital Human Products

- Common issues: low realism, choppy movements, rigid translation, incomplete sign libraries
- No unified evaluation criteria, making quality assessment difficult

## 3. Low Comprehension Rate of Existing Sign Language Services

- Only 7.69% of deaf users can "fully understand" TV sign language news
- Only 36.9% satisfaction rate with interpretation services
- Key issues: small display, mismatched speed, regional dialect differences

## Purpose & Significance of the Standard

- Establish unified technical indicators and scientific evaluation framework
- Enable accurate product performance measurement, regulate market order
- Promote high-quality product development, fill human interpreter resource gaps
- Guarantee equal rights for deaf people to participate in social life

## Key Application Scenarios

- Government public services, medical consultation, public transport
- Emergency call support, TV/online video content accessibility
- Daily communication, customer service, online education
- Built-in accessibility features on smartphones and smart devices

# vivo Contribution to GB/T 47517-2026



ICS 35.240
CCS L 70

中华人民共和国国家标准

GB/T 47517—2026

信息技术　手语数字人技术规范

Information technology—Technical specifications for sign language digital human

2026-04-30 发布　　2026-11-01 实施

国家市场监督管理总局
国家标准化管理委员会　发布

## Key Drafting Participant

- Led technical requirements for smartphone-side sign language digital human systems
- Defined real-time performance benchmarks
- Added mobile terminal test environment specifications — establishing smartphones as standardized test carriers for digital human evaluation
- Proposed speed control requirements (Clause 7.5.4)
- Proposed video quality requirements (Clause 7.5.5)

……

# THANK YOU FOR YOUR ATTENTION



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