



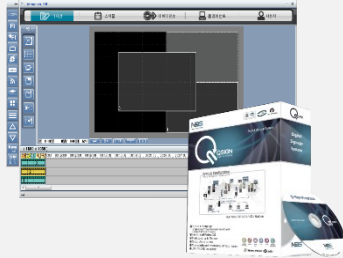
Wayfinding Guide

Q-ROBOT



Hardware

Outdoor / Indoor
Video Wall & Display
Mirror Display
Smart Kiosk



Software

Total Signage Solution
Content Authoring Tool
Window/Android
Cloud



NDS Solution Co., Ltd.



Content

3D Wayfinder
Manu Board
Motion Detecting
Face Recognition



System

Planning & Introduction
Installation & Support
System Stabilizing
Maintenance

VOICE RECOGNITION WAYFINDING ROBOT DESIGN AND PERIPHERALS

STANDARD



PREMIUM



Main Function Smart Responding to Customer Inquiries



CUSTOMER SERVICE

TRANSFER
Ads / INFOTASK
GUIDESIMPLE
TASKING

WAYFINDING

OBSTACLE
AVOIDENCEMULTI
TASKINGFACE
RECOGNITIONSYSTEM
INTEGRATION

VOICE RECOGNITION WAYFINDING ROBOT SPECIFICATION

SORT	STANDARD	PREMIUM
SIZE	L590*W590*H1590	
WEIGHT	60KG	
MATERIAL	ABS parts, Reinforced fiber plastic housing	
RATED POWER	80W	
AMBIENT LIGHT	Side Arm *2	
SPEAKER	15W WiFi Inner Speaker	
MIC	AIUI MIC: Recognition Range : Max 5M, Angle : 0-180 °, Noise Cancel	
CAMERA	Face Recogniton Camera Vertical, Horizontal Angle of field : 125 ° Backlight protection, Resoltuion 300 million pixels	
	-	3D Motion Detecting Camera
SCREEN	23.6inch PCAP Touch Screen 1920*1080P LCD Screen(Eyes) 320*240	
MOVING	Head: Horizontal Turning Angle : ± 40 ° Vertical Turning Angle : ± 10 ° Drivable Slope Angle : ± 3 ° (※ Can't stay at a slope) Max Velocity: ≤1m / s	
PERIPHERALS	-	58mm Printer
	-	NFC
	-	QR Scanner
BATTERY	24V 30Ah, Driving: 10H, Full Charge: 4H	

SORT	STANDARD	PREMIUM
SENSOR	Ultrasonic Wave Sensor*2: Scan Distance : 1900mm Angle(All-Direction) : ± 30 ° Object Detecting Sensor*2: Scan Distance : 5M, Angle : ± 45 °	
CHARGE	Voltage : 200-240VAC, Current : 6A	
SYSTEM	Android5.1	
CPU	RK3368	
INTERNET	WIFI 2.4G/5G	
RAM	DDR4_2400 4G	
SSD	128G	
NAVIGATION	Viewing Angle : 360 ° Detect Blind Spot: 0.1m Detect Resolution : 3cm Data Speed : 256000bps Working Distance : White Object : 40 M Black Object : 10 M Accuration : ± 5cm * Voltage : 5V Current: 3W Working Temperature : 25 ° C	Viewing Angle : 270 ° Working Distance : 0.05 ~ 10M Response : 67ms System Error : ± 60mm Statistic Error : ± 20 mm Voltage : 0 V DC-28 V DC Current: 3W Level : IP 65
AVOIDANCE SYSTEM	Lidar : Distance : 0.05 ~ 8M, Angle : 270 ° Ultrasonic Wave Sensor*2: Distance : 1900mm, Angle(All-Derection) : ± 30 °	
DEVELOPMENT	API, SDK	

What a Robot can do is..

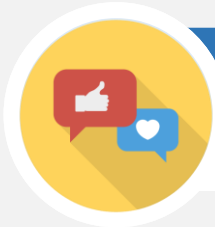


Customer Service

Automatically recognize targets and people to welcome, and if you specify a moving route, it moves to the designated route.

Transfer Ads and Information

Display various advertisements, videos, and images on touch screen. Information of other facilities and products.

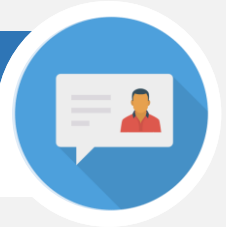


Task Guide

By building an intelligent database on demand, able to do simple tasks such as answer frequently asked questions.

Face Recognition

Automatic face recognition through camera. Related information can be displayed by the data that already entered.



Wayfinding System

Using building guidance system contents, robot can guide various destinations by name, floor, and district.

Others

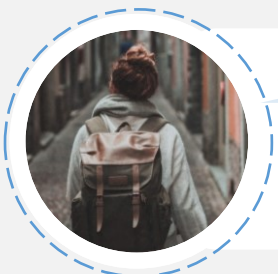
Able to handle simple tasks such as hospitality and wayfinding at the place of bank, hotel, airport, shopping mall, etc.



Where to?



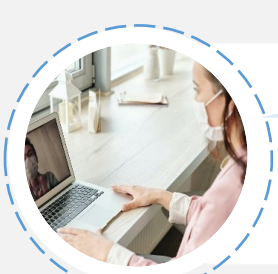
- Media commercial market
- Media company based on building commercial.
- For advertising and wayfinding in a building.



- Local and tourist spot guide
- Places where many foreign residents and visitors.
- International marriage, study abroad, travel, etc.



- Public Institutions
- Government institutions, hospitals, museums, and etc.
- Places requiring foreigner information and translation services.



- Non-face-to-face Service
- Places requiring non-face-to-face services or voice wayfinding.
- Public places requiring non-face-to-face workforce.

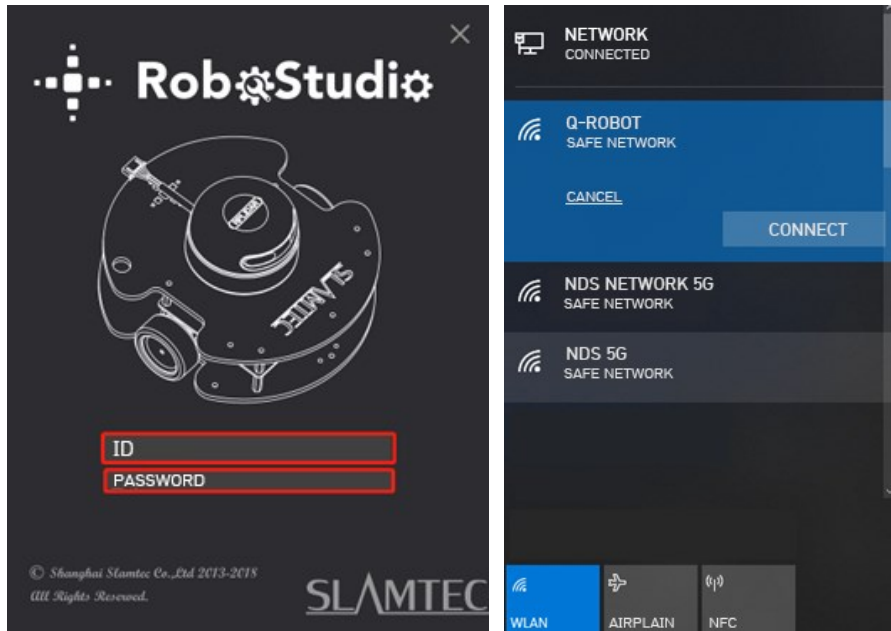
What can
I help you?



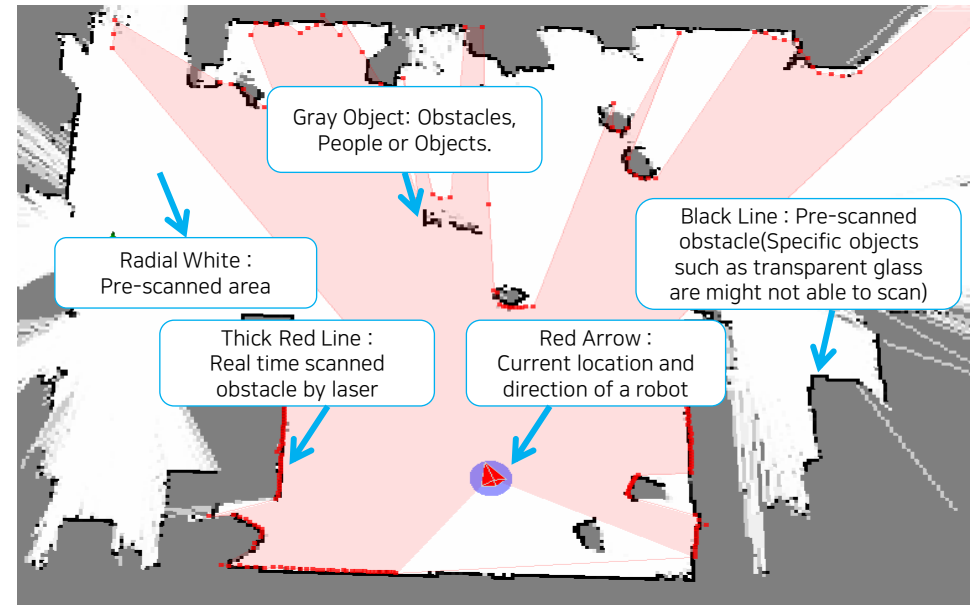
AUTONOMOUS DRIVING SYSTEM

Private program

- WiFi connect after log-in the program

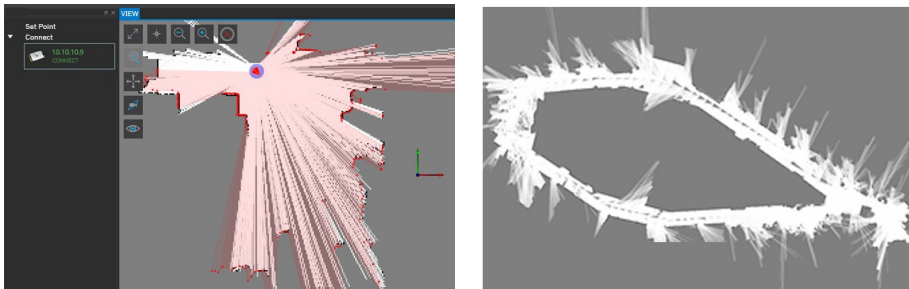


Scan interface



- Available to add POI Point (Navigation point)
- Setting option of charge device installation
- Easy management of scanned map by making save file

Create a route map using autonomous driving scan



PREVIEW



Overview



MAP

- Multi Touch(Zoom in/Out)
- Route to destination
- Direction change of map
- 3D Image



SEARCH

- By floor and category
- Keyboard searching
- Quick Menu
- Change floor



MAINTENANCE

- Compatible with Q-Sign 3.0
- Support various contents (RSS/Image/Video/etc.)
- Total managing by 1 server
- Q-wayfinder light version

Face Recognition

- Face Recognition advertisement by gender, age
- Recognition : 3 types of data(Gender, age, actual person)
- Graph library / Data binding



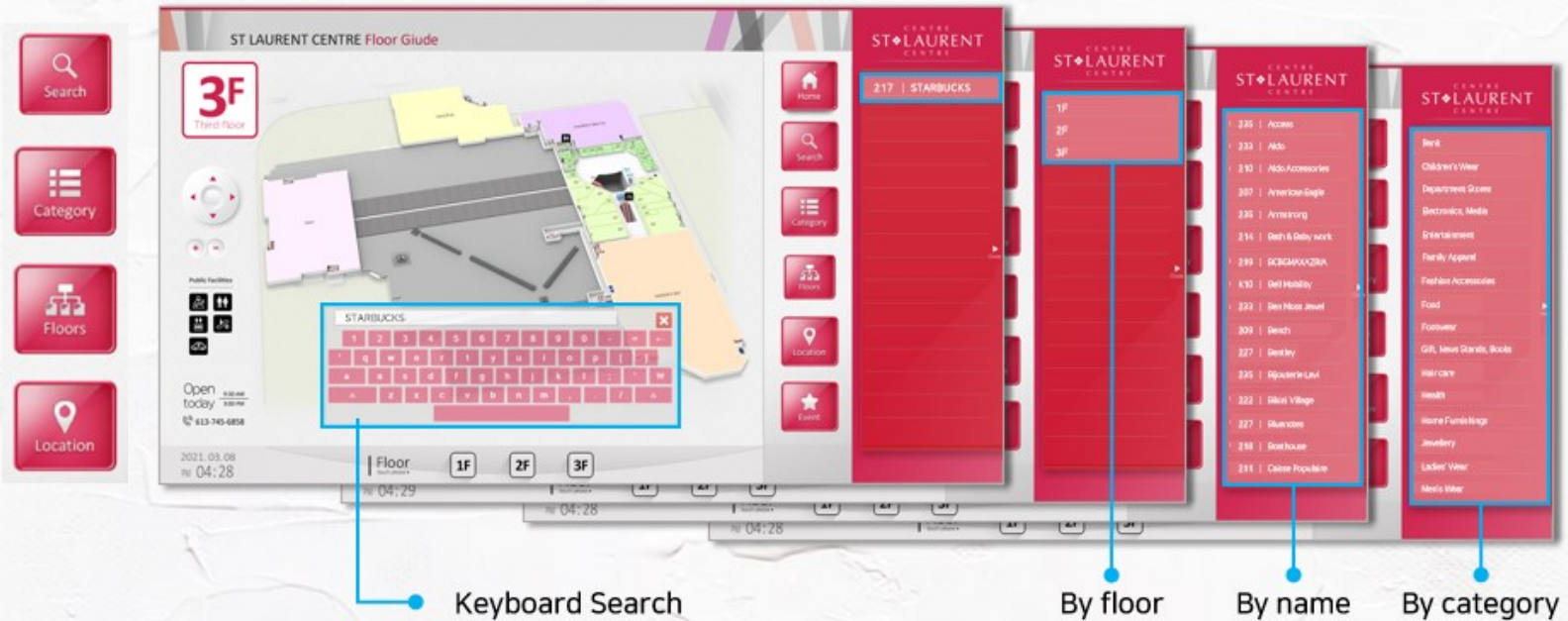
Voice Recognition

- Multilingual voice recognition and play using Google Cloud Speech (Korean, English, Chinese, Vietnamese)
- FAQ answer and wayfinding with recognized language
- Voice output of each language



1. Searching : By floor, name, category / Quick menu

ST. LAURENT MALL



BEACH MALL

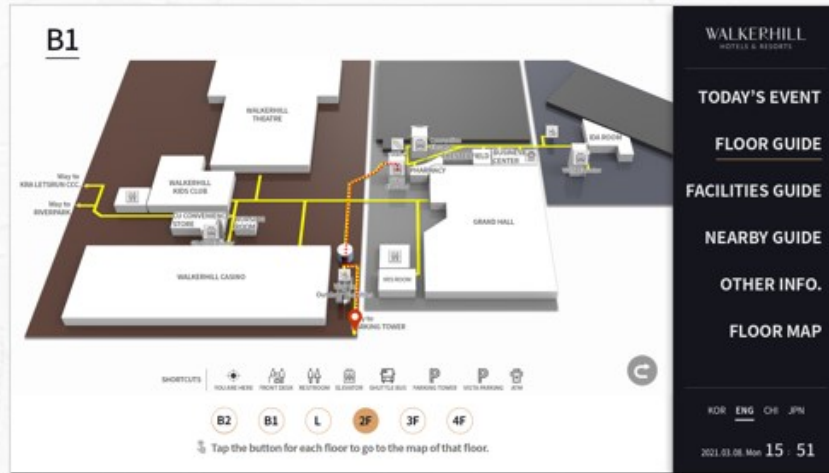


GANGWONLAND CASINO

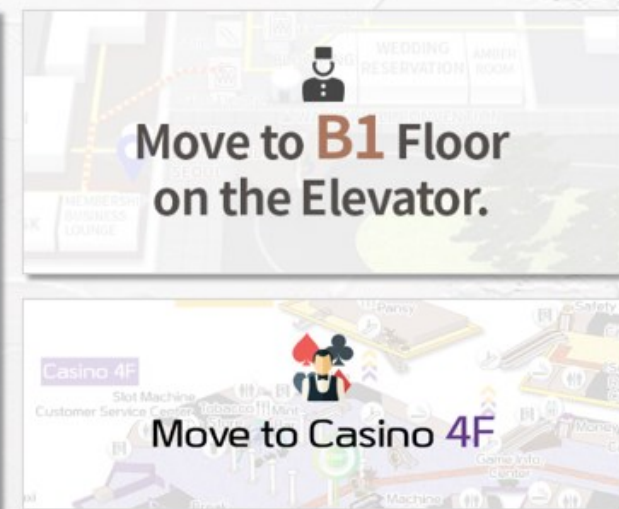


2. Wayfinding(Inside a building)

From my location to destination



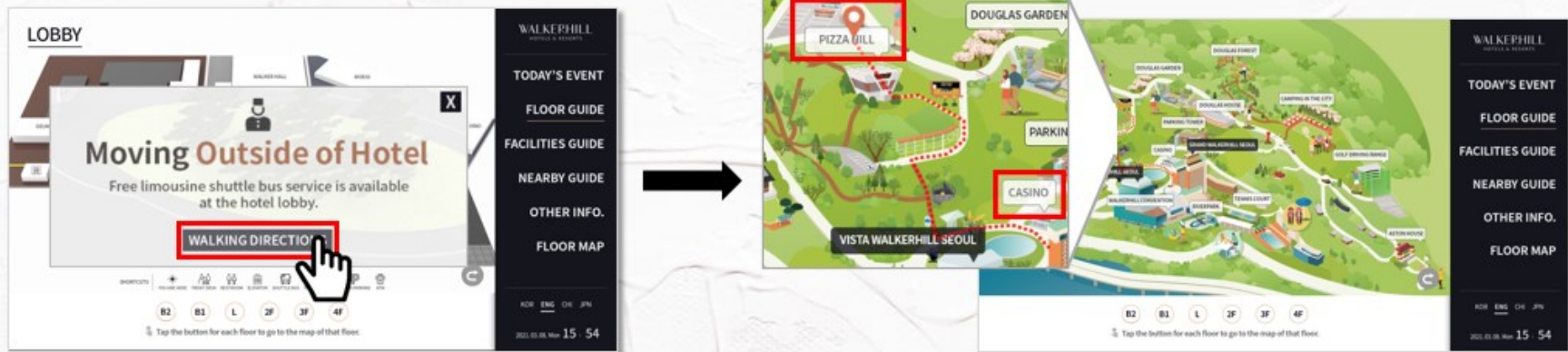
Notification pop-up when moves to other floor or building



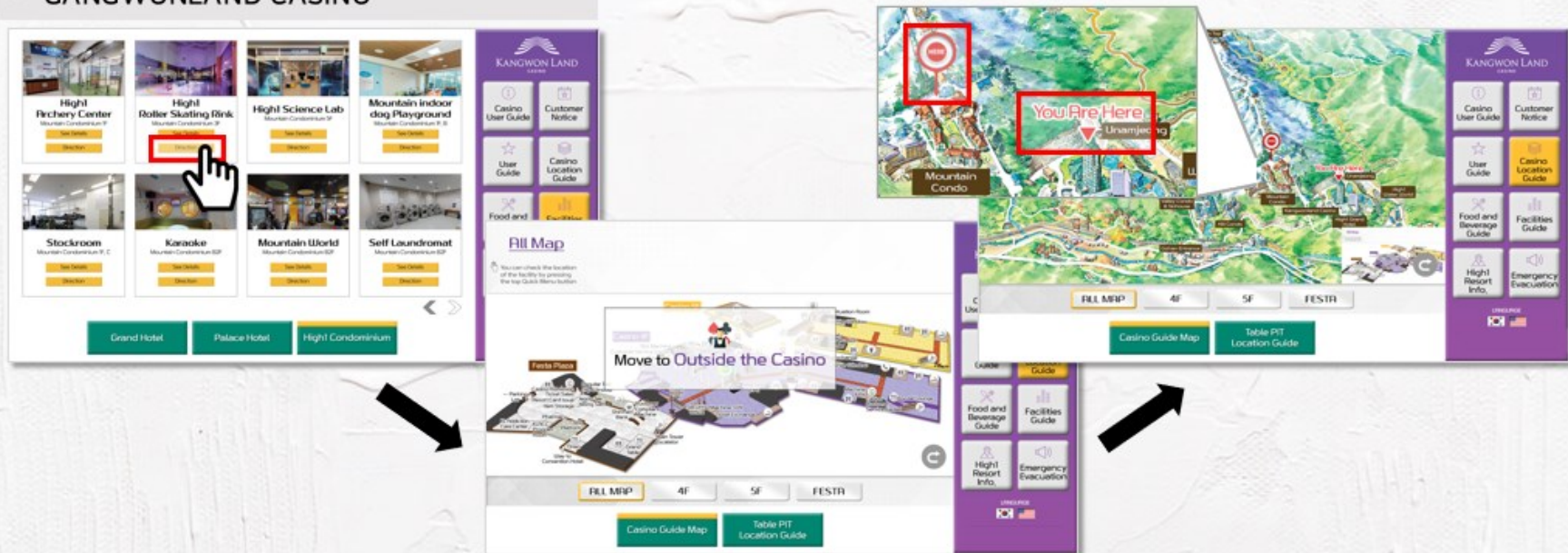
3. Wayfinding(Building to Building)

Wayfinding to the outside of a building

• WALKERHILL HOTEL



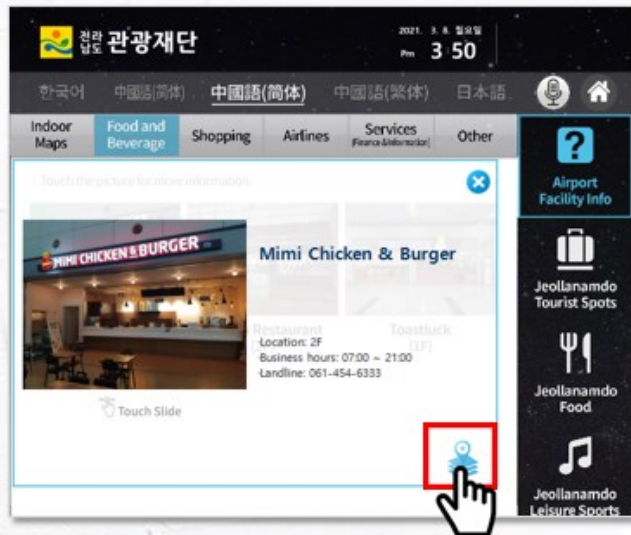
• GANGWONLAND CASINO



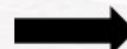
03 MAIN FUNCTION_Q-Wayfinder

4. Pop-up page for shop information

Wayfinding after pop-up page shows



Shows pop-up page after wayfinding



5. Screensaver

Display screensaver if there is no interaction detected for the set time

- WALKERHILL HOTEL



5s



- MUAN INTERNATIONAL AIRPORT



10s



- GANGWONLAND CASINO



5s

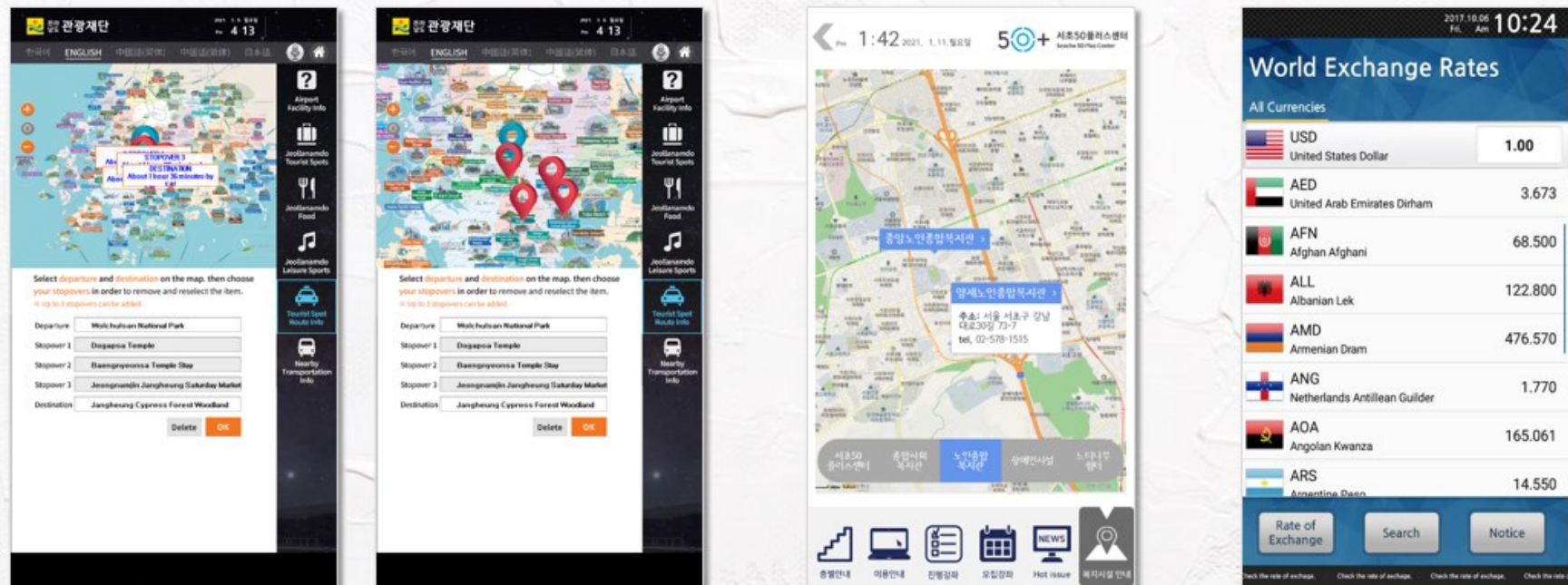


6. Database and web page integration

Web page integration



Database integration



Destination list DB

Online map

Application

7. Voice recognition

Multi-language voice recognition



Voice recognition FAQ list

FAQ LIST

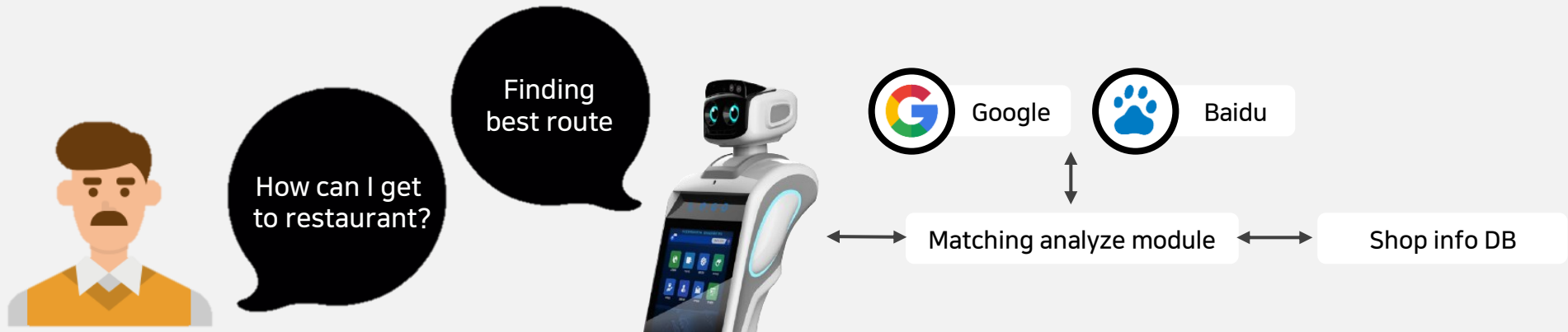
한국어

영어

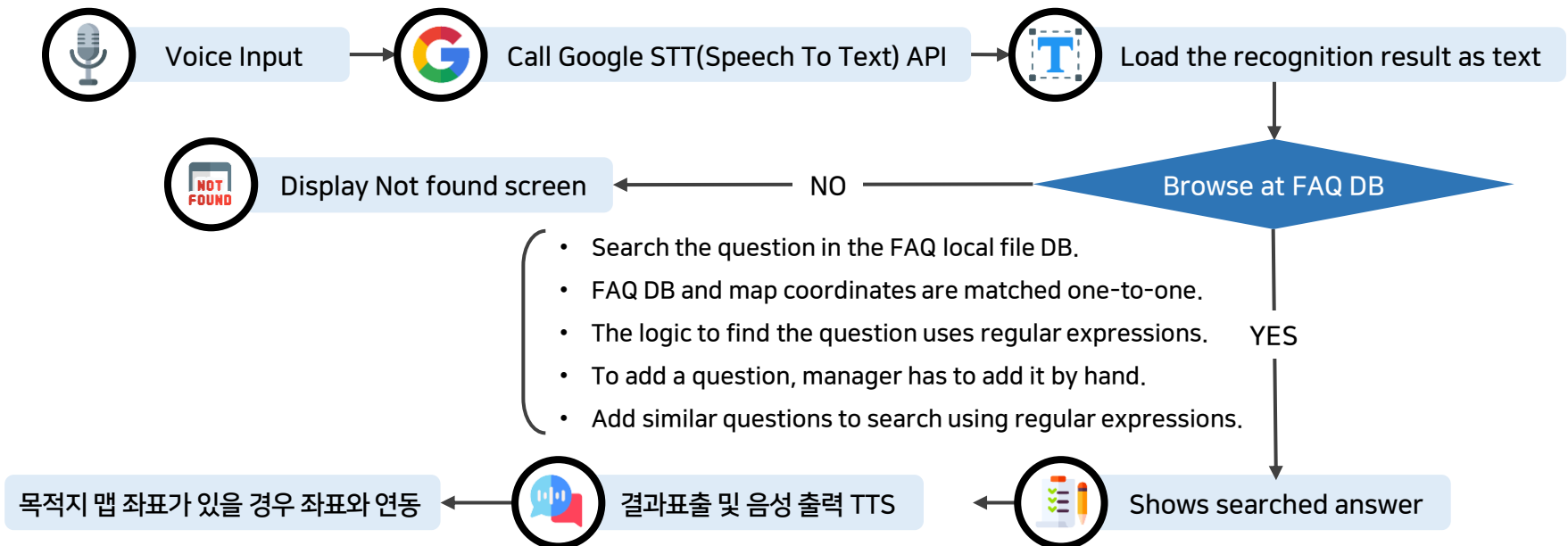
베트남어

중국어

7. Voice recognition

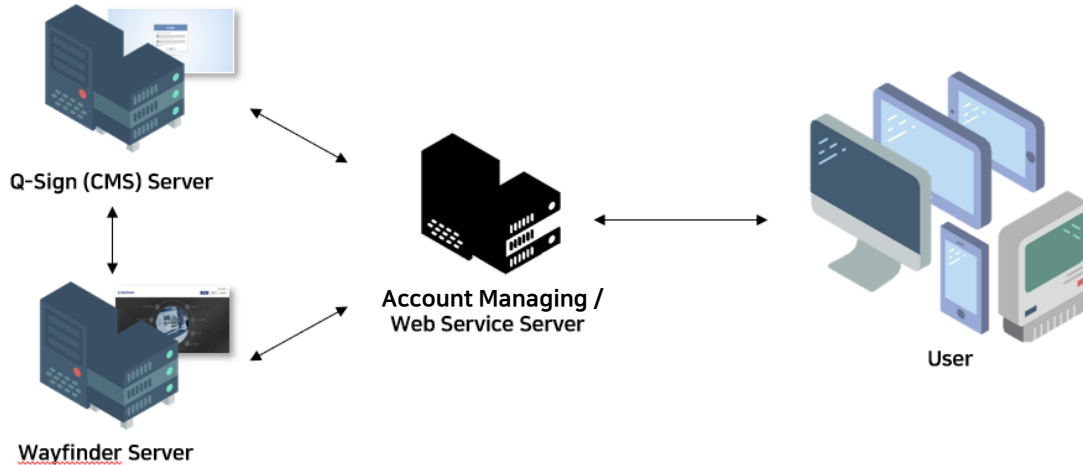


Multilingual voice recognition process diagram

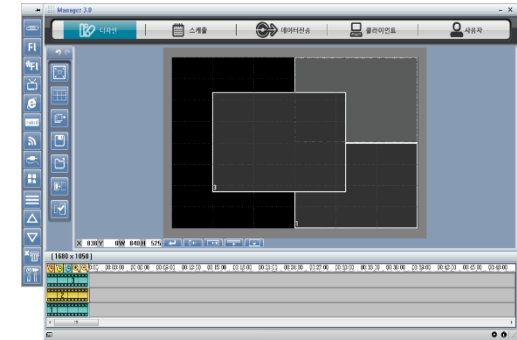


Q-SIGN CLOUD VERSION

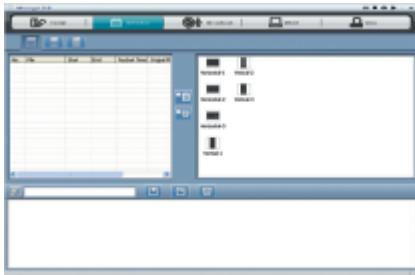
Cloud Server



MAIN FUNCTION

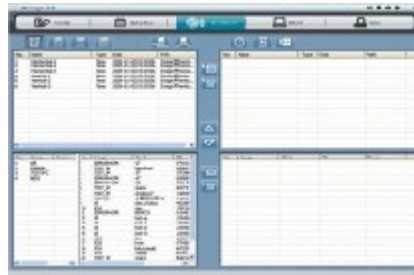


- ▶ Support 15 languages.
- ▶ Easy installation within 15mins.
- ▶ Content design and schedule transmission.
- ▶ Support various application formats.



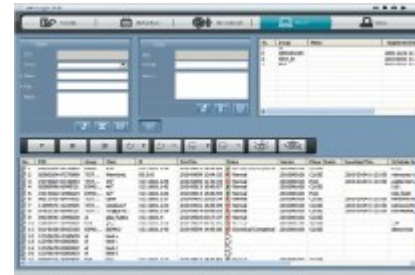
Schedule

- Daily, Weekly, Monthly schedule
- Selectable schedule management



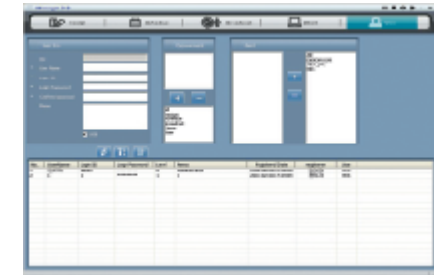
Data transfer

- Immediate/reservation/Emergency data transfer and USB transmit



Client

- Remote power and monitor on/off
- Monitoring clients status



User

- Multi User Registration
- Distribution of User authority

Q-SIGN CLOUD VERSION

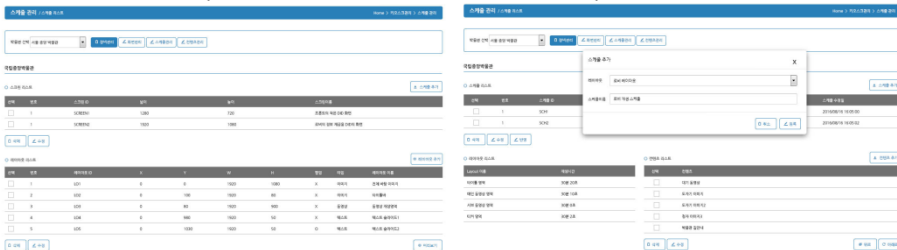
WEB based CMS Q-SIGN 1.0

- Web based CMS makes you control it anywhere in the world
- Include main function of CMS(Making, Managing, transmission, Client control, Emergency notice etc.)
- Efficient managing by distribution of site/client to each manager
- Available in various environment by multi browser support



Maximized user friendly interface

- Simple data flow and network for minimize traffic
- Only core functions included for minimize system resource usage and hardware overhead
- Contents will be played stably even data base are downed
- Automatically restart when client abnormally ends



All main functions of PC version of Q-Sign 3.0 is available

Manage Display

Register/Delete/Power control/Screen status/Play status/Check error

Manage Screen

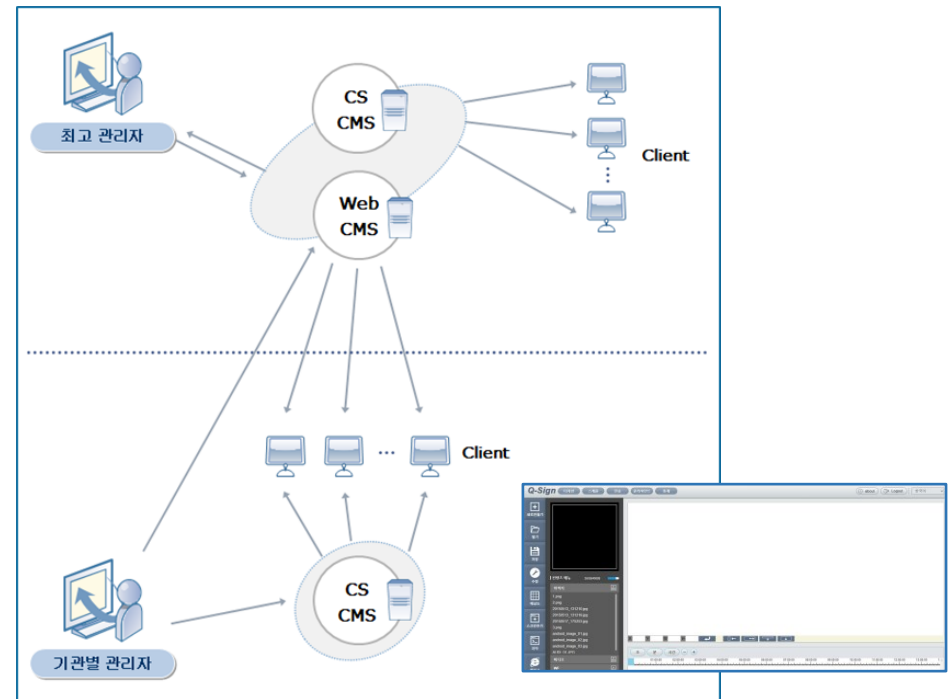
Add/Edit/Delete screen, Add/Edit/Delete/Preview of layout

Manage Schedule

Add/Edit/Delete schedule, Add/Change order/Delete of contents

Manage Contents

Add image/video, Edit registration info, Add subtitle, Emergency notice





For more information

Our website

- www.netds.net

Contact

- email horatio@netds.net
joe.yoon@netds.net