

Interactive Voice Assistant for Automotive / Mobile

Advanced Technology Demonstration Only

Customer Benefits

- Recognizes naturally spoken language even if standard phrases are not used.
- Results are returned vocally.
- Even if conditions are added, the context is understood and a search is performed (narrowing down process).
- Destinations can be set vocally.

Actual usage

Is there a **gas station** around **here**?

Tell me a <u>parking</u> area around <u>Central Park</u>.

Are there **Spanish restaurants** for a **date**?



Are there any **banks**?

I want to have <u>Italian</u> with <u>family</u>. And use a <u>VISA card</u>. <u>\$40-\$50</u>

Here's what I've found. There is "XXXX" in 0.2 miles.

Cuisine	Spanish, Japanese, sushi, tempura, Italian, pasta, pizza, French, chicken, BBQ etc.
Price Level	\$40-\$50, less than \$10, low, cheap etc.
Merchant Service	all you can eat, children, night view, barrier free, outdoor dining, family, date, lunch, business dining etc.
Payment	Visa, MC, Master card etc.
Location (U.S.)	New York, Manhattan, Central Park, Empire State Building, Times Square etc.

Navigate me.

Show me how to **get there**.



Sent the destination to the car navigation.

Key advantage of Technology

By speaking into a specialized car-navigation microphone, users can search for facilities or weather information and receive answers vocally through the car-mounted speakers.

All processing required for voice interaction is performed at the center server in order to provide the following features.

- 1. To execute the extraction of the speech section required as a pretreatment of speech recognition and the noise cancellation specific to in-vehicle environment, with high accuracy
- 2. The speech recognition in natural speech utilizing a huge amount of recognition dictionary database
- 3. To estimate the speech contents and the intent of the speaker by use of the advanced understanding capability and an inference engine
- **4.** To execute the processing corresponding to the request from the speaker by use of various contents as well as the latest and real-time information
- 5. To send back the execution result and the search result by natural speech, using a huge amount of speech dictionary database

Voice recognition, meaning understanding, and speech synthesis analysis use an external platform.

