

# Loquendo Automotive Solution

THE COMPLETE SPEECH INTERFACE SOLUTION FOR AUTOMOTIVE TELEMATICS INTEGRATING SPEECH RECOGNITION AND SPEECH SYNTHESIS WITH PRERECORDED PROMPTS

*Loquendo Automotive Solution is the complete speech solution that in-car telematics and navigation device manufacturers have been looking for!*

*After studying the navigation market carefully, we have designed a set of unique features that make our Automotive Solution more reliable, effective, and easy to integrate and use in navigation systems.*

*These features, along with a highly efficient architecture, multilingual capabilities, accuracy and naturalness, as well as modularity and flexibility common to all of Loquendo products, make this solution unique in its field!*

## TTS Distinctive Features

### Specific automotive database

Loquendo has created a specific high quality, pre-recorded database of several hundred phrases commonly used by navigation systems. This permits users to have the perfect pre-recorded quality along with the full TTS flexibility.

### Phonetic Standards Support

Loquendo TTS fully supports TeleAtlas® and Navteq™ SAMPA phonetic alphabets, increasing the quality of the speech rendering when reading addresses, sign posts and points of interest, in any language, leveraging on the *mixed language capability*.

### Mixed Language Capability

Each Loquendo voice is able to speak any other available language! This means that, for example, our Italian voices can speak English with an Italian accent,

or a French voice speak German with a French accent. This unique and patented feature is extremely useful for the reading of navigation commands and addresses when you are out of your home country, or simply for reading foreign street names in your home town.

### Expressivity and personalization: give character to your user interface!

Loquendo is the only speech technology provider that has introduced expressive speech to the market, providing expressive cues that enable users to personalize TTS style.

This is done by simply inserting tags into the text, or even adding punctuation, without the need for new recordings.

Some examples of what you can do:

### Large language coverage, continually expanding.

You can choose between more than 25 different languages and over 60 male and female voice personas according to your needs and preferences.

Additional languages can be planned and modified with our strategic partners in order to meet their needs.

### Footprint flexibility: you choose your size!

Whether you select the 8, 11, 16, 22, 32 or 44 kHz sampling rate, various compression bit rates and different sized databases are available to give you the maximum flexibility in choosing the right quality/memory trade-off according to the system's constraints.



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## ASR Distinctive Features

### Core technology

Loquendo's speech recognition is a completely speaker independent product based on a hybrid neural networks plus continuous density hidden markov models approach, providing reliability and a high level of accuracy in the recognition performance.

### Flexibility of recognition modalities

With Loquendo's Automotive Solution you can choose to have recognition grammars based on phonemes as well as voice enrolled grammars and the actual recognition can occur in different modalities such as continuous speech, word-spotting or phonetic decoding.

Developers can tune the voice detection sensitivity, compile grammars on the fly and set the recognition confidence scores at word or even sentence level.

### Automotive Optimization

Our core embedded speech recognition technology has been optimized in terms of speech and noise robustness for the specific automotive environment. It is highly accurate and returns results quickly even on CPUs with limited resources. The acoustic models have been specifically trained to the in-car environment and are highly robust to typical automotive background noise. The support of very large grammars makes voice destination entry a straightforward and simple task!

## Multiplatform solution

Loquendo Automotive Solution is available with the same languages/voices and the same core engine on a wide range of platforms:

Windows Mobile 5.0 & 6.0 (all editions), Microsoft Auto 4, Win CE 5.0, Windows XP Embedded and TabletPC ed., VXWorks, Linux, Symbian OS S60 (2nd/3rd edition), QNX, iPhone, Android.

All these versions use the same APIs (Loquendo API, JSAPI and Microsoft SAPI) and are compliant with the international standards: SSML, IPA and SAMPA.

To find out how Loquendo's offering can position your company for success, please visit [www.loquendo.com](http://www.loquendo.com) and try our TTS demos.

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LANGUAGE	No. VOICES AVAILABLE	FEMALE	MALE
Australian English	2	Grace	Alan
American English	4	Susan, Allison	Dave, Steven
Canadian French	2	Charlotte	Olivier
American Spanish	2	Soledad	Carlos
Brazilian Portuguese	3	Fernanda, Gabriela	Felipe
Mexican Spanish	1	Esperanza	
Chilean Spanish	1	Francisca	
Argentinian Spanish	1		Diego
British English	3	Elizabeth, Kate	Simon
Castilian Spanish	3	Carmen, Leonor	Jorge
Catalan	2	Montserrat	Jordi
Valencian	1	Empar	
Galician	1	Carmela	
Portuguese	2	Amália	Eusébio
French	4	Juliette, Florence, Sophie	Bernard
German	2	Katrin	Stefan
Dutch	2	Saskia	Willem
Italian	10	Giulia, Paola, Valentina, Silvana	Matteo, Luca, Fabio, Marcello, Roberto, Mario
Greek	3	Afroditi, Artemis	Nikos
Turkish	2	Zeynep	Kerem
Swedish	2	Annika	Sven
Polish	2	Zosia	Krzysztof
Finnish	2	Milla	Mikko
Danish	2	Frida	Magnus
Norwegian	1	Vilde	
Russian	2	Olga	Dmitri
Arabic	2	Laila	Terik
Mandarin Chinese	2	Linlin, Lisheng	
Romenian, Japanese, Indian English	Under development		

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