



**2008 Frost & Sullivan European Telematics and Infotainment  
Emerging Company of the Year Award**



*“Partnering with clients to create innovative growth strategies”*

## 2008 Frost & Sullivan European Telematics and Infotainment Emerging Company of the Year Award

### Award Description

The Frost & Sullivan Award for Emerging Company of the Year is presented each year to the company that has emerged as a significant participant within its industry. This company is perceived to have exhibited outstanding management, superior market growth, exceptional customer service and the ability to combine technology and successful strategic initiatives. This company has the exceptional know-how to take advantage of market changes through the execution of innovative strategies within the existing competitive landscape.

### Research Methodology

In order to select the Award recipient, analysts quantify several market factors for each market participant according to predetermined criteria, paying close attention to their combined operations efforts. This process includes interviews with market participants, customers, and suppliers, along with extensive secondary and technology research. The companies' efforts are then analyzed based on the number of new customers, new segments, and commitment to business expansion coupled with market growth.

### Measurement Criteria

In addition to the methodology described below, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this Award has excelled based on one or more of the following criteria:

- Proof of success executing a restructuring strategy
- New market penetration (geographic, product, etc.)
- Marketing, promotion, and visibility of the company
- Degree of strategy innovation
- Technological innovation and leadership
- Increased name recognition
- Revenue and market share growth

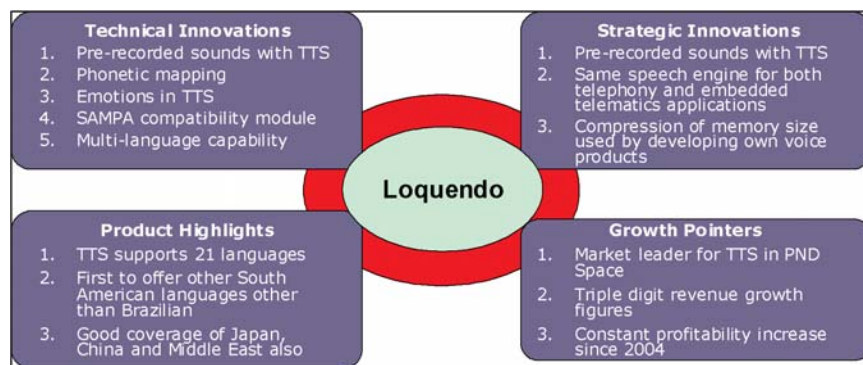


### Technology and Strategic Innovations are the USP of Loquendo

Loquendo as a company was started in 2001 as a spin off from Telecom Italia Research Centre. It is still owned by Telecom Italia, but functions as a separate company. The company as such has over 30 years of research and core knowledge in speech, but only for the telephony market. After developing numerous languages for the telephony market, Loquendo then made a strategic move to reap more benefits from these existing languages in a new market, which was the embedded space, in general, and the automotive telematics space in particular. Following this, Loquendo made a number of strategic moves to penetrate the automotive market. These are as follows:

- Using the high-quality speech engine created for the telephony market in a scaled down manner in the embedded market without sacrificing on quality. This was made possible by extreme optimisation on the software side to enable it to run on a much less powerful device. This move also made it possible for Loquendo to use this engine on the telephony side and run many channels concurrently. Therefore, this strategic move had benefits from both the embedded and telephony aspects.
- The second strategic move was to develop its own speech encoder to compress the memory size used by the voice database on an embedded device which will enable running its engine; for example, a low-end PND with limited data storage capacity.
- The last strategic move done specifically for the car navigation market in Europe by Loquendo was to deliver a solution which is a mixture of pre-recorded prompts and TTS. This is because of the fact that automotive industry in Europe is used to having pre-recorded sounds for a number of applications. However, in the case of reading signposts and street names, what was required was a TTS solution which is very reliable and dynamic. In the case of having purely pre-recorded sounds, vehicle manufacturers and suppliers had to invest a huge amount of money and update all the existing platforms. Loquendo, by providing a solution which offers both, thus fits their bill perfectly, making this a key strategic move.

Chart 1.1 – Key Overview of TTS and Voice Solutions of Loquendo



Loquendo also introduced a number of technological innovations into its TTS solutions to meet the requirements of the Aftermarket and PND space.

- **Pre-recorded prompts with TTS:** This particular factor gets classified both as a strategic and a technology innovation by Loquendo. Technically, the innovation with this package was to segment the voice database into two parts – one which has the normal TTS and the other part which had all pre-recorded phrases used by a particular customer included. The other major technical innovation in this area was to use the same speaker for both TTS and pre-recorded prompts. For example, if a consumer is using a TomTom PND and plans a route, there is a mix of TTS and pre-recorded prompts which are used while translating this route to the consumer.
- **Phonetic Mapping:** This is a patented technology used by Loquendo to enable each of Loquendo voices to speak any foreign language, in a way understandable to the consumer. For example, if the consumer is moving from Italy to France and if the signposts or the street names are in French, this patent will enable the TTS algorithm behind an Italian voice to recognize a French name and then speak it with an Italian accent. This is a major innovation because registering street names is a must for navigation to happen smoothly. However, the confusion is because of the fact that street names are in different languages. The phonetic mapping patent allows TTS and Automatic Speech Recognition (ASR) to make the best use of Teleatlas and NAVTEQ phonetics of the street names, which are included in navigation data bases. This innovation will help erase the problem of accents and languages which are encountered by consumers very frequently. This innovation is also on the basis of the multi-language capability of Loquendo's TTS solutions whereby, for example, Italian voices can speak English with an Italian accent or vice versa.
- **SAMPA Compatibility:** For developing TTS solutions, compatibility with Speech Assessment Methods Phonetic Alphabet (SAMPA) is important. Based on the SAMPA, both Teleatlas and NAVTEQ have developed their own phonetic alphabets, namely the Teleatlas SAMPA and NAVTEQ SAMPA. Loquendo has moved a step further by developing a TTS module which can read the normal SAMPA and both the Teleatlas and NAVTEQ SAMPA. This will enable the company to increase the quality of the speech rendered when reading addresses, sign posts and points of interest, in multiple languages, leveraging on its phonetic mapping patent and multi-language capabilities.
- **Emotions in TTS:** This was the latest technological innovation from Loquendo in the TTS space for automotive and PND applications. The innovation at the top level was to include emotions into the TTS space - which is able to emote and also read emotions; for example, a smiling face can be converted into laughter. Loquendo, leveraging its modular capabilities, has developed two sets of databases – one which is a special database of non-linguistic sounds like laughing, crying, and the like and the other which has emotionally marked sentences, which will enable same things to be said in different ways and tones.

All these technological and strategic innovations prove the reliability and quality that Loquendo offers in the TTS space and its ability to leverage its research in the telephony sector to the embedded space.

## About Best Practices

Frost & Sullivan constantly tracks companies across various industries globally. It conducts in-depth interviews with industry participants as part of its syndicated research process. The plethora of primary interviews, along with extensive secondary research, provides Frost & Sullivan with reliable market intelligence and knowledge of the best practices adopted by diverse organizations.

The Best Practices Program provides accolades to companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as market leadership, technological innovation, customer service, and strategic product development. The content used to identify the Award recipients is sponsored by Frost & Sullivan and then licensed by recipient firms for external marketing campaigns. Many Award recipients have appreciated the impartial, third-party validations provided by Frost & Sullivan and have leveraged the Award with current and prospective customers, with investors, and with employees.



## About Frost & Sullivan

Frost & Sullivan, a global growth consulting company, has been partnering with clients to support the development of innovative strategies for more than 40 years. The company's industry expertise integrates growth consulting, growth partnership services, and corporate management training to identify and develop opportunities. Frost & Sullivan serves an extensive clientele that includes Global 1000 companies, emerging companies, and the investment community by providing comprehensive industry coverage that reflects a unique global perspective and combines ongoing analysis of markets, technologies, econometrics, and demographics. For more information, visit [www.frost.com](http://www.frost.com).

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