

# Natural Language

## Self Service Solutions

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## 1. Introduction

**Natural Language** is **VOCALCOM**'s pioneering technological platform for natural language processing and intelligent dialogue management.

Founded in 2005 by INFINITY, Natural Language is the most advanced supplier of customer care solutions based on language artificial intelligence. These solutions are based on the parse and semantic analysis, with memory management and artificial intelligence permitting a natural dialogue between humans and machines.

The R&D&i dept. is led by one of the greatest world-wide experts in this field (José Fco. Quesada), who along with a group of Computational Linguists and Software Developers has created Natural Customer Self Service, a voice and text self service innovative platform.

NC-Self Service<sup>®</sup> allows:

- ✓ To speak and/or to write freely, being the system responsible for understanding, analyzing or generating all the elements for a natural dialogue.
- ✓ A natural, flexible and collaborative dialogue adapted to users' interaction, not being a dialogue model driven only and exclusively by the system or defined by menus.
- ✓ A complete adaptation to the user profile managing its historical dialogues with the objective to personalize the interactions, with optimized strategies for the memory management.

**Natural Language:** adding value to businesses and managing **profitable relations with customers**

### Fields of Application

The highest natural language and dialogue comprehension, together with the quality of the interaction of Natural Language<sup>©</sup> can be used in text chat as well as in voice conversations, in three main activities:

1. e-commerce platforms, as a virtual assistant, achieving a more natural and tailored level of customer attention.
2. Voice portals and contact centers, replacing traditional IVR and reaching an immediate ROI.
3. Domestic industry that will become one of the biggest technological revolutions in the short term.



## 2. NC-Self Service

**Natural Language** has developed **NC-Self Service®**, the new generation voice and text self service solution.

**NC-Self Service®** is a productive technology:

- + It allows to understand what a customer is requesting, so, in consequence to adapt the conversation and to connect to the corresponding information systems.
- + It manages applications based on written and spoken language using the same resources for both, analyzing sentences in microseconds with a total lexical level scalability in massive exploitation environments.
- + It allows to support up to 15.000 simultaneous dialogues on one unique server (Intel® Xeon® 3,2 GHz - 4 GB RAM).
- + An enhanced and versatile integration in different levels with the proprietary platforms.
- + It allows to approach a complete and logical treatment of the natural language comprehension and the dialogue management adapted to the dialogue context.
- + Maintenance, exploitation and system management with an advanced natural language graphical interface.



### 3. Technology

The natural language as the point of connection between users and the technology.

In general, the history of technology and especially of computer science has been characterized by a progressive trend towards the simplification of the use of systems and computer components.

In many technological areas several strategies have been designed and implemented to facilitate the relation between systems and users.

**And the natural language that we use daily is the most comfortable, most agile and most general way of communication.**

This is the reason why in Natural Language our approach is directed toward a complete and logical treatment of the natural language comprehension and the dialogue management adapted to the dialogue context.

**Natural Language design**

Natural Language has a modular design that eases to develop the required representation models and algorithms for each particular project, with interfaces to allow connectivity with Data Base Management Systems and other components that are external to the system core. Natural Language technology relies on a general focus that also takes into account a precise memory and CPU consumption thanks to memory share models and multi-threading strategies and an Exploitation-oriented architecture using load-balance and fail-over.

#### NATURAL LANGUAGE TECHNOLOGIES

