Abstract. The last years have been very prolific in the study of methods, methodologies and even development process in the area of Agent Oriented Software Engineering. However, there are two aspects that are not developed sufficiently, the first is the acquisition and establishment of requirements and goals for Multiagent Systems from the descriptions of customers / users. The second is a successful implementation of reverse engineering to implementations undertaken in order to retrieve a detailed design of the application obtained. The concern of this work focuses on the first of these aspects. The proposal applies techniques of natural language processing, throughout the entire lifecycle of multi-system, to obtain a model and improve product required. One noteworthy point of this proposal is that the client is actively involved in the development process in a manner non-attendance. Lastly, the proposal allows maximize obtaining initial models for different projects, minimizing their involvement in this process.

Keywords: Natural Language, Initial Models, Multiagent Systems, Agent Oriented Software Engineering.

1 Introduction

As for the implementation of an information system, its realization is always an expensive task that involves a lot of effort. Thus, the presence of environments automated software provides a great advantage when it comes to deal with this work, because it represents a significant savings in both material and temporal.

INGENIAS [7] is a recent methodological proposal for the development of applications based on Multi Agents Systems.

In order to generate code automatically specification on starting out, you have to integrate all the features of the organization and not to be ambiguous.

To avoid the need for manual development models that develop a solution to the problem, is that the proposed system through a very active involvement by the client avoids a significant participation of the analyst.

It proposes an iterative process with the customer / user, which can describe this in writing and in natural language (in his own words) the problem we want it solved. The various iterations (do not need the involvement of the analyst) actively engage customers in the development process (can be made against the system by the customer from any location) and are accurate to better understand the domain of the application, the
problematic and also to disembogues vague descriptions or impersonal. At each iteration the text introduced undergoes an analysis and subsequent transformation process leading to the award of a model based on INGENIAS.

The rest of the article has been structured as follows: The second section is devoted to the proposed model. The following section presents our tool proposed. It continued section 4 makes a series of conclusions and future work, and lastly the classical sections of acknowledgements and references.

2 Our Proposal

The system raised multiagent is going to arise on the basis of the aims of the system and the first organization of the system in agents / roles. The aims are associated with cases of use described by means of scenes in those who develop individual tasks and interactions among the identified agents / identified roles.

As the description initial other that raises us the client / user to solve the problem is going to realize it in natural language not to force this one to have to be able to interpret the methodology of development, which in many cases would be so or more complex than the solution to the raised problem. Doing it in natural language, raises as principal disadvantage the possibility of that present ambiguity that is going to be solved by the involvement of an active way on the part of the client / user in the different phases of the process of product development, with this there are also going to avoid possible forgotten of characteristics that it must have the product or in coherences of what must have the end product developed with regard to the first realized description the organization model.

In the process of acquisition it differs between the aims of the System that indicate what is tried to obtain by the development, and the aims of an Agent who is what has, needs or this agent wants to reach to satisfy or to help to satisfy an aim of the system. As for the roles they are characterized as the set of actions that determine a distinctive behaviour of an agent. When multiagent refines [1] the graph of the system the roles they are constructed in cases of use that are in use for solving the aims indicated by the role. If the aims to resolving are a complex at the time the subsystems can be used as elements of refinement. On the other hand, the Roles realize Tasks that cover Activities and that satisfy the aims to resolving. In general the identification of all these elements of shaped comes from interviews, between the client and members of the equipment of development (analysts, engineers of requirements...) that remain reflected as descriptions in natural language in most of the cases.

In the process of identification of elements of shaped of the system multiagent from a description of text in Spanish the following characteristics are born in mind: The agents [5] are going to be extracted from the own names, the objects and the subjects of the passive verbs of the description.

The cases of use are going to correspond with the lexical verbs, due to the fact that the verb of the prayers that defines a case of use must be transitive. An idea similar to it, is the used in marked automatically of texts raised in [2].