

## SUMMARY

---

The intention of this thesis is to propose an architecture for the construction of systems that are a synthesis of the current customizing modules of the ERP Systems (Enterprise Resource Planning) and of the Knowledge Based Systems, especially the Intelligent Tutoring Systems and the Intelligent Help Systems, as well as a methodology for creation of procedural contents supported by the above mentioned architecture.

The utility of such a system is based in the need to provide certain intelligence to the current ERP Systems, used in the wide enterprise spectrum, and certain mechanisms of formalization, structure and modeling of the customizing procedures, because this process is one of the principal success factors in the implantation and use of a ERP System.

First, we are going to analyze the current state of the management enterprise systems, exactly the ERP System, and their needs in the context of the new economy, their advances and especially their limitations. We will do the same thing with some classic systems of Artificial Intelligence and Knowledge Management, especially with the Intelligent Help Systems and Intelligent Tutoring Systems. From these studies we will find their possible application in the area of the management strategy applied to the ERP Systems customizing.

To begin we will propose a modular system architecture that includes a series of functions and fundamental characteristics. After, the necessary components will be defined, also, the relations between them and the flow of internal information and with external agents, like the users of the proposed system and the ERP System to customizing.

We will define a methodology to create some interactive knowledge bases that include, on the one hand, rules about the domain knowledge (parameters and

functioning of the ERP System), and, for other, rules about enterprise management (strategies and quality indexes) based on a previous development of an enterprise taxonomy. In this way, we will transform the experts' knowledges and manuals (natural language) into formalized knowledges that are easily interpretable for a computer and easily understandable for ERP consultants and workers and executives of companies of all kinds of sectors.

As illustration of the architecture and methodology proposed we will develop a prototype applied to a real and very widespread ERP System and to a type of company representative of an important sector. For the construction of this prototype we have used techniques and tools presented and analyzed in this thesis.

After, we will expose the conclusions and future works related to the treated topics, highlighting the importance and innovation of the application of intelligent systems in the enterprise management strategy environment and the construction of the necessary knowledge in a formalized, verifiable, interactive and not very costly way. Among the future works and opened investigation lines, we will emphasize the need of creation different enterprise taxonomies and different quality criteria, which they should guide the proposed assistant in a personalized way and the extension of the methodological frame to other areas and activities.

Finally, we will include the documentary sources (including Internet links) in which we have been inspired, without any intention of thoroughly in a referential frame subdue to continuous changes.