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TITLE OF DIPLOMA THESIS:

A knowledge based system for trading, packaging, storing and distributing agricultural products

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ABSTRACT

In recent years, heightened competition between businesses has prompted them to explore the importance of knowledge. Knowledge management, is key to a competitive business environment. Due to technological advancement, knowledge can be managed more efficiently, and the advent of the Semantic Web will also allow for the implementation of more advanced management systems. The Semantic Web, which is the future of the World Wide Web, aims to represent the meaning of data in such a way that it is machine-readable. To this end, ontologies, which are used to represent knowledge on the Semantic Web, play an important role. At the same time, they are considered necessary for modeling a field of interest as well as for sharing and organizing available knowledge. In the context of this master thesis, an OWL ontology has been developed using the Protégé ontology editor to collect and use knowledge for trading, packaging, storing and distributing agricultural products. The study of the agricultural industry has been chosen because, apart from being one of the most important industries, it is an essential pillar of the Greek economy. Furthermore, a decision support system was developed for the selection of an appropriate supplier. The choice of a supplier is a multi-criterion problem that has become a decisive factor in the financial success of a business. The criteria for choosing a supplier are cost, quality and services provided by the supplier. The latter being analyzed further with the delivery time, the quality of communication, the duration of cooperation or contract, the experience of the supplier and distance of the supplier. This system assists the user in making a decision that is objective, valid, timely, transparent and

KEYWORDS

Knowledge Management, Ontology, Protégé, Decision Support System (DSS), Agricultural Products