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A Multi-agent System for Performing Consensus Processes in Heritage problems

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Heritage is essential for our society and has a great importance in our lives because we can know about our history by it. For this reason it is necessary take care of our ancestors' legacy in order to leave it for future generations.

Nowadays there are several institutions, which have the aim to look out for the heritage. The most relevant actions carried out for these organizations are: restoration, preservation and acquisition of new artworks. It is necessary define an expert commission, which deal to make a group decision, when these organizations try to choose a project to carry out. Usually, there are limited economic resources an in some cases there are many monuments or artworks which need a fast intervention. For this reason, it is necessary to achieve a high agreement level, to achieve a consensus, to choose the project, which obtains the grant.

The need for achieving consensus in group decision making problems is a common and sometimes necessary task in several environments. There are many consensus reaching processes which deal with achieve agreement among a group of experts. Traditionally, processes are guided by a human moderator, but some new proposals try to facilitate such a process arose by automating the moderator tasks. However, not many consensus support systems have been developed so far, due to the difficulty to manage intelligent tasks and cope with the negotiation process involved in consensus. This contribution aims to present an initial prototype of an automatic consensus support system for heritage problems, developed by using the multi-agent paradigm that provides intelligent tools and capacities to tackle the inherent complexity found in this problem.