Ontology-based management of the scientific activity in software development projects

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The management of the scientific activity in software development projects is essential for the success of the projects. This fact was confirmed in a survey applied to software projects managers where the 93 % point out that a deficient management of the scientific activity of the project may affect the quality of the developed products and provoke deviations in the project. To tackle these deficiencies, in this paper an ontology–based approach to support the management of the scientific activity in software development projects is introduced. Since ontologies are a formal language, with the adoption of this approach is possible to achieve a semantic analysis of the represented information in order to detect inconsistences as well as infer new knowledge. The ontology was created following a sound methodology and its evaluation confirmed that it is correctly designed, meets the specifications as a formal logical system, and satisfies the requirements for which it was created. This ontology may be a useful instrument in order to enhance the efficiency and effectiveness of the management of the scientific activity.