



EFFECTIVE KNOWLEDGE MANAGEMENT INFRASTRUCTURE USING KNOWLEDGE GRID

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ABSTRACT

Knowledge GRID (KG) is an intelligent and sustainable Internet application environment that enables people or virtual roles to effectively capture, publish, share and manage explicit knowledge resources. Knowledge Management (KM) in e-learning based on KG makes easy use of the GRID technology and integrates the methods and tools of KM in e-learning to support the whole cycle of knowledge application in enterprise. Review of contemporary publications indicates that whilst many research activities are done on e-learning KM using new technologies like KG, the research in the area related to the seamless integration between them and the drill-down process have not received the attention it deserves. This issue is addressed in this paper with the introduction of a comprehensive infrastructure by integrating KG and EKM for e-learning systems based on service orientation principles and open standards, providing a synergetic combination of various techniques and technologies related to effective knowledge sharing and management. In this paper, we propose a service-oriented infrastructure of KM in e-learning environment in order to achieve more effective knowledge sharing and knowledge service. Our proposed infrastructure is a comprehensive and effective enterprise knowledge-based framework aimed for the analysis of knowledge management and development of enterprise knowledge in e-learning systems and integrates them with the KG technology. This approach concerning the modeling of enterprise domains and aspects that are essential for the development of the concept of enterprise knowledge management based on KG. First, an enterprise infrastructure is suggested for the phases of enterprise knowledge management by a system framework. That model is then enhanced with the concepts of KG technology from e-learning viewpoint by considering architectural view. A discussion on and how in our proposed infrastructure enterprise knowledge management and e-learning can be integrated and leveraged for effective online education and training is then presented.

Keywords: Knowledge GRID, Enterprise Knowledge Management, Knowledge Repository, Agent