

Towards the Development of Effective and Flexible Information Systems

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Abstract

The development of Information Systems which are effective (i.e. satisfy users' needs) and flexible enough to incorporate future changes of user requirements basically depends on the importance given to the requirements analysis stage and to the techniques employed in this stage. This paper presents a new approach to requirements analysis through an environment called VENUS. The VENUS environment provides a set of tools to support the requirements capture and analysis process so that design and development is more effective and flexible. The construction of the VENUS environment is based on the construction of a User-System Relationship Model which is then transformed to an Object-oriented Rule-based Model (ORM) where rules are used for the definition of the behaviour of each object class. ORM is then mapped to a graphical Petri-net based model and is validated by employing graphical Petri-net based models underlying Petri-net formalism.

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