Towards an evolutionary model generation for ERP performance simulation

The performance of ERP systems is a critical success factor for the reliable operation of a business. A promising approach to cope with the complexity of nowadays' ERP systems and to predict their actual behavior is simulation. Commercial ERP systems, however, only provide limited insight and thus several components have to be handled as black boxes and require a modeling approach. In this paper we depict an approach to increase the accuracy of ERP system performance simulation by using an evolutionary algorithm for modeling the black boxes performance behavior. We can show that evolutionary algorithms are able to generate performance models for ERP components based on measured performance data that describe the performance behavior of these components accurately. Furthermore we point out the characteristics of the algorithm, as well as its advantages and disadvantages, and give an outlook about the future research.

Intellectual Contribution: Discipline-based Research