Providing Integrated Life Cycle Support In Process-aware Information Systems

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The need for more flexibility of process-aware information systems (PAISs) has been discussed for several years and different approaches for adaptive process management have emerged. However, only few of them provide support for both changes of individual process instances and the propagation of process type changes to a collection of related process instances. Furthermore, knowledge about process changes has not yet been exploited by any of these systems. This paper presents the ProCycle approach which overcomes this practical limitation by capturing the whole process life cycle and all kinds of changes in an integrated way. Users are not only allowed to deviate from the predefined process in exceptional situations, but are also assisted in retrieving and reusing knowledge about previously performed changes in this context. If similar instance deviations occur frequently, process engineers will be supported in deriving improved process models from them. This, in turn, allows engineers to evolve the PAIS (including the knowledge about the changes) over time. Feasibility of the ProCycle approach is demonstrated by a proof-of-concept prototype which combines adaptive process management technology with concepts and methods provided by case-based reasoning (CBR) technology.

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