Flexible Coordination of Service Interaction Patterns

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ABSTRACT

Service-oriented computing is meant to support loose relationships between organisations: Collaboration procedures on the application-level translate to interaction processes via Web Services. Service composition deals with the specification and enforcement of such processes. Its main focus is on service *orchestration* where workflow management is utilised for proactive coordination. In such an approach, coordination process and interaction logic are usually captured in the same workflow – which leads to deficiencies in recognising the possible impact of operational coordination on the interaction logic. In this paper, we claim that the choice of coordination alternatives impacts the quality of the composed service and has to be customised to each specific service case. As a consequence, we outline a solution that is based on *service interaction patterns* where the paradigms of patterns and idioms are applied to interaction procedures and orchestration processes. This allows studying a) reusable interaction patterns typical for service relationships and b) for each pattern a range of possible coordination idioms. Finally, we sketch a technique that refines the service logic based on analysis of its interaction patterns and utilisation of suitable coordination idioms selected by rules in terms of changing service context.