

# Provisioning of Complex Adaptive Services

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## ABSTRACT

Service oriented computing is becoming the standard paradigm to support the creation of applications composed of services selected from a registry. Nowadays, we are assisting to the proliferation of standardized approaches to describe such services, but there is the general agreement of distinguishing between the general characteristics of services and the characteristics associated with service invocation. In many cases, the selection of services is static and based on matching techniques to retrieve the most appropriate service.

The paper presents the MAIS architecture to provide highly adaptive services in a mobile and interactive environment and we focused on service selection and invocation, context-aware orchestration and mechanisms for managing user interaction in a service-oriented architecture. We propose adaptivity at different levels: at process level, during the selection of a concrete service, and also at end user level. Selection is based on suitable ontologies and considers the actual context and user characteristics to retrieve the most suitable services. The paper describes the main components of the architecture and exemplifies them on a simple process for a shipping company.