

Designing Mobile Service Systems

2nd Edition

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modular as organizations can only use those modules that match their needs.

In this chapter we focus on ‘best-of-breed’ applications. Often these modular components are connected using service-oriented architectures. In such a strategy managers focus on decision-making around the selection of the best-of-breed components. Architects are involved in this decision-making, and should have to possibilities and impossibilities in mind of integration best-of-breed applications in to total landscape.

3.3 Technologies for service-oriented architectures

There are many technologies that can be used to create a service-oriented architecture. The most notable that is used more and more are web services technology. Web services provide machine-to-machine communication to enable interoperability between (distributed) applications. Web services provide a way for sharing information and functionality using standard protocols crossing departmental and organisational borders. In this way existing information and functionality can be used when building new service systems. Although web services enable technological interoperability, there is still a need to standardise the data formats of the interfaces.

The paradigm of web-services is often associated with modularity (Janssen & Wagenaar, 2003). With web-services, software functionality and data can be “packaged” and accessed as a web service. Wrappers and adapters often make legacy systems accessible by providing an interface based on standard protocols. Many different types of modules can be found, described, discovered, and integrated using web-services technology. Service-oriented paradigms are becoming more important in today’s design of information systems. Service-oriented business integration enables the on-demand composition of new business processes using already existing services possibly provided by other parties. In service-oriented applications, services are configured to meet a specific set of requirements at a certain point in time, to be executed and then disengaged. Services only ‘exist’ during execution, and modules provide services.

The World Wide Web Consortium (W3C) defines a web services as “a software system designed to support interoperable machine-to machine interaction over a network” (www.w3c.org). The goal of web-services is to abstract business logic from implementation. In this way it should provide a way for communication between applications that is platform, vendor and application independent. In fact, web services perform encapsulated business functions, so that there is no need to bother with implementation de-