

On Usability of Web Services

Axel Martens

Humboldt-Universität zu Berlin,

Department of Computer Science,

10099 Berlin, Germany,

E-mail: martens@informatik.hu-berlin.de

Abstract

This paper is concerned with the application of Web services to distributed, cross-organizational business processes. Web services provide a platform independent concept of components and composition. Thus, they seem to be a proper technology to cover the heterogeneous structures within distributed business processes: One Web service realizes a local subprocess. A distributed business process is realized by the composition of a set of Web services.

Although the technological basement is given, there is a lot of open questions: Do two Web services together in a way, that the composition yields a deadlock-free system? - the question of compatibility. Can one Web service be exchanged by another within a composed system without running into problems? - the question of equivalence. Can we reason about the quality of one given Web service without considering the environment it will be used in? In this paper we present the notion of usability - our quality criterion of a Web service. This criterion is intuitive and can be easily proven locally. Moreover, this notion allows to answer the other questions mentioned above.

The approach and the results presented in this paper are taken from a larger framework for modeling and analyzing business processes by help of Web services published in my PhD thesis [9].