



Christian Dörner

Tailoring Software Infrastructures

Integration of End-User Development and Service-Oriented Architectures

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Today's non-tayloristic work environments call for flexible work practices supported by dynamic IT systems. Changing and optimising business processes has become an important 'adaptation mechanism' in this context. However, process models cannot capture every conceivable real-life situation, and firms' software infrastructures often do not provide the flexibility required for supporting 'design-in-use' through effective tailoring processes.

The involvement of business users in the continuous redesign of business processes is a beneficial solution for these problems, as it enhances decision processes by making specific information available more quickly. However, involving business users in these redesign processes requires specific design tools. This book presents the development of an environment that enables business users to independently model business processes and workflows.

The environment reduces the technical skills required for modelling business processes and workflows to enable business users to tailor heterogeneous software infrastructures. It also provides improved documentation facilities. The facilities add usage-related information about Web services to the existing functional metadata, which is already included in current Web service standards and workflow modelling tools. The environment enables business users to create this usage-related information cooperatively, which leads to a domain-specific documentation of Web services. Based on this information, it provides an enhanced search system that identifies related services and service functions.

The evaluation of the environment showed that users had a positive perception of modelling business processes and workflows. They considered this to be useful for the visualisation and automation of business processes as well as for the creation of calculations since it could enhance the efficiency and efficacy of their work.

With a Foreword by Prof. Dr. Volker Wulf, University of Siegen

Christian Dörner holds a PhD in Information Systems from the University of Siegen. He studied Information Systems at both the University of Siegen and the University of Skövde from 2001 to 2006 and wrote his Diploma thesis at SAP. The author received a Diploma degree from the University of Siegen where he was PhD student and research assistant in Professor Volker Wulf's group from 2006 to 2009 finishing his PhD thesis with summa cum laude. In 2010, he received a Feodor Lynen Research Fellowship from the Alexander von Humboldt-Foundation, supporting his work as a Postdoctoral Fellow in Professor Brad Myers's group at Carnegie Mellon University. He has published over ten papers in international conferences and journals, such as the European Conference on Information Systems and IEEE Software.

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