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IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly. National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

Luis M. Camarinha-Matos
Alexandra Pereira-Klen
Hamideh Afsarmanesh (Eds.)

Adaptation and Value Creating Collaborative Networks

12th IFIP WG 5.5 Working Conference
on Virtual Enterprises, PRO-VE 2011
São Paulo, Brazil, October 17-19, 2011
Proceedings

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Preface

Collaborative networks (CNs) emerged more than a decade ago as a key element of economic growth and a very active area of scientific production. Dynamic collaborative organizations properly respond to the increasing need of strong adaptability to the constantly changing economic context. Several collaborative forms such as virtual organizations, virtual enterprises, professional virtual communities, industry clusters and business ecosystems are now supported by large research and business practice communities. These new organizational forms require the development of a new theoretical base. In recent years, many international projects have contributed to these needed scientific advances. The accumulated body of empiric knowledge and the size of the involved research community has provided the basis for the foundation of what is now a well-established scientific discipline on “collaborative networks”. This discipline is strongly multidisciplinary and thus the PRO-VE Working Conference is designed to offer a major opportunity to gather contributions from engineering, economics, management, and socio-human communities, among others.

Value creation is a major challenge for organizations in times of economic turbulence and rapid societal changes. CNs represent a determinant inductor of value creation, not only for business communities, but also for other entities in society. Understanding and modeling the process, assessing, and developing methods and tools to support value creation in CNs is an R&D challenge requiring a multidisciplinary approach. The capability of generating value in a networked society requires high self-adaptation capacity, both from the participating entities in order to adhere to a collaboration culture, as well as from the CN as a whole to dynamically adjust to the needs, constraints, and opportunities posed by a rapidly changing environment. The main focus of PRO-VE 2011 was thus on the crucial aspects that can empower CNs as a main actor of change in society.

PRO-VE 2011 held in São Paulo, Brazil, was the 12th event in a series of successful conferences, including PRO-VE 1999 (Porto, Portugal), PRO-VE 2000 (Florianopolis, Brazil), PRO-VE 2002 (Sesimbra, Portugal), PRO-VE 2003 (Lugano, Switzerland), PRO-VE 2004 (Toulouse, France), PRO-VE 2005 (Valencia, Spain), PRO-VE 2006 (Helsinki, Finland), PRO-VE 2007 (Guimarães, Portugal), PRO-VE 2008 (Poznan, Poland), PRO-VE 2009 (Thessaloniki, Greece), and PRO-VE 2010 (St. Etienne, France).

This book includes a number of selected papers from the PRO-VE 2011 Conference, providing a comprehensive overview of recent advances in various CN domains and their applications, with a particular focus on adaptation of the networks and their value creation. With this focus, this edition of the conference specifically emphasizes CN topics related to: evolution from social networking to CNs, social capital, value chains, co-creation of complex products, performance

management, behavioral aspects in CNs, CNs planning and modeling, benefit analysis, sustainability issues etc., as well as including important technical and scientific challenges in applying CNs to areas such as advanced logistics networks, business processes modeling, service orientation, and other emerging application domains, for example, ageing, tourism, crisis, and emergency scenarios, among others.

Similar to previous editions of PRO-VE, this book itself is the result of cooperative and highly distributed work among the authors of its articles and the input from the International Program Committee members who contributed to paper evaluations. It therefore represents a valuable tool for those interested in research advances, emerging applications, and future challenges for R&D in CNs. We would like to thank all the authors both from academia/research and industry for their contributions. We also appreciate the dedication of the PRO-VE Program Committee members who helped with the selection of articles and contributed with their valuable comments to help authors improve the quality of their work.

July 2011

Luis M. Camarinha-Matos
Alexandra Pereira-Klen
Hamideh Afsarmanesh

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