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IFIP – The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the first World Computer Congress held in Paris the previous year. A federation for societies working in information processing, IFIP's aim is two-fold: to support information processing in the countries of its members and to encourage technology transfer to developing nations. As its mission statement clearly states:

> *IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP's events range from large international open conferences to working conferences and local seminars.

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 generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also 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.

IFIP distinguishes three types of institutional membership: Country Representative Members, Members at Large, and Associate Members. The type of organization that can apply for membership is a wide variety and includes national or international societies of individual computer scientists/ICT professionals, associations or federations of such societies, government institutions/government related organizations, national or international research institutes or consortia, universities, academies of sciences, companies, national or international associations or federations of companies.

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Abdelaziz Bouras · Benoit Eynard
Sebti Foufou · Klaus-Dieter Thoben (Eds.)

Product Lifecycle Management in the Era of Internet of Things

12th IFIP WG 5.1 International Conference, PLM 2015
Doha, Qatar, October 19–21, 2015
Revised Selected Papers

Springer

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Preface

The IFIP International Conference on Product Lifecycle Management (www.plm-conference.org) started in 2003 and since then it has been held yearly around the world and has facilitated the exchange and discussion of the most up-to-date information on product lifecycle management among professionals from academia and industry. This is the official conference of the IFIP Working Group WG 5.1 "Global product development for the whole lifecycle" (www.ifip-wg51.org), and IFIP PLM 2015 was held in Doha, Qatar, October 19–21, 2015.

Product lifecycle management, also known as PLM, is an integrated business approach to the collaborative creation, management, and dissemination of engineering data throughout the extended enterprises that create, manufacture, and operate engineered products and systems.

IFIP PLM 2015 marked the 12th anniversary of the conference, which continues its progress at an excellent rate both in terms of quality and quantity. The topics covered in the program include languages and ontologies, product service systems, simulation and virtual environments, future factory, knowledge creation and management, sustainability and systems improvement, configuration and engineering change, assessment approaches, and education studies.

One of the objectives of the conference is to provide a platform for experts to discuss and share their success in applying advanced concepts in their respective fields. The IFIP PLM 2015 conference included an outstanding technical program, with distinguished keynote speeches on current development and future visions from NIST and other renowned universities as well as an insightful tutorial on "Data Cleaning and Machine Learning from QCRI" (Qatar Computing Research Institute). The conference also offered a great opportunity to young and aspiring researchers to present their research proposals and on-going work during a dedicated PhD Workshop on the pre-conference day. This regular workshop is designed to support students in their networking activities and help them build their future community.

In line with the conference scientific sessions, IFIP PLM 2015 aimed at encouraging innovation and exchange with industry and market sectors. A full day was dedicated to industry applications, highlighting some international innovation initiatives and Qatar's efforts to foster incubation and entrepreneurship.

This book, organized in 15 chapters, is composed of selected enhanced papers presented at the IFIP PLM 2015 conference. It is part of the IFIP *Advances in Information and Communication Technology* (AICT) series that publishes state-of-the-art results in the sciences and technologies of information and communication.

In addition to this conference, the *International Journal of Product Lifecycle Management* (IJPLM) is the official journal of the WG5.1 (www.inderscience.com/ijplm).

On behalf of the conference, we thank all the authors, sessions chairs, reviewers, and keynote speakers for their help and support in achieving a great conference. Our gratitude goes to H.E. Dr. Mohammed Saleh Abdulla Al Sada, Minister of Energy and Industry, for his interest and presence during the conference days; to the QNRF Qatar National Research Fund for its support and sponsorship; and to the College of Engineering of Qatar University for its great support.

We hope this book serves as a step forward in this exciting area of PLM and we look forward to meeting you at the next PLM conference in South Carolina, USA, during July 11–13, 2016 (www.plm-conference.org).

March 2016

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