



Reducing risk in innovation

Proceedings of the 15th International DSM Conference
Melbourne, Australia, 29 - 30 August 2013

Dependency and Structure Modelling (DSM) techniques support the management of complexity by focusing attention on the elements of a complex system and how they are related to each other. The DSM perspective can assist in understanding, designing and optimising complex systems - including products, processes and organisations.

This volume comprises peer-reviewed papers representing state-of-the-art in DSM research and applications. The papers were presented at the 15th International DSM Conference held in August 2013 in Melbourne, Australia.

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Scheurmann, Maurer, Schmidt, Lindemann
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Foreword

Welcome to the 15th International DSM Conference in Melbourne, Australia.

Complexity is perceived as an ever-present challenge in almost every business.

The increasing complexity and the need for integration of systems and processes and their components in an increasingly complex, risky and globally distributed operating environment drives the search for simpler, leaner and low risk product, process and organizational architectures.

Especially the design of highly integrated systems, the management of process focused organizations and the adaptation of new products to different markets require robust approaches to the smooth and efficient modelling, analysis and synthesis of appropriate solutions to working with such complexity that work at the front end of innovation.

The understanding of dependencies in complex systems early in the innovation phase can lead to the generation of better, unique and copy-proof product architectures and intelligent management of innovation risk. This enables and drives innovations otherwise not possible. Therefore, if managed the right way, working with complex systems provides many opportunities to a business that cannot be realized otherwise.

Over the last couple of decades Dependency and Structure Modelling (DSM) methods have found their entry as mainstream applications in many corporations in many industries around the globe.

The formation and consolidation of the DSM industry Special Industry Group (DSMiSIG) as a supporting mechanism for DSM users in industry has proven itself over the last 12 months.

However, a strong scientific basis and continuing testing of new DSM methods and applications by scientists and industry practitioners alike is required to ensure that new systems and processes in industry are fulfilling the expectations of industry in improved system and process performance.

With an original strong homebase in the US and Europe the DSM community expanded its range significantly. After an outstanding event in Japan 2012, this year the community meets in Australia for the first time.

The two days of this annual conference are designed to act as a catalyst and forum for scientific discussion, interaction with industry and the members of the DSMiSIG and as a springboard for framing the scientific direction of DSM methods for the next few years.

Elke Scheuermann, Mike Stowe and Maik Maurer

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Danilo Schmidt, Technische Universität München, Germany

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