

Business Process Simulation Revisited

Wil van der Aalst

Eindhoven University of Technology
Department of Mathematics and Computer Science (HG 7.75)
PO Box 513
NL-5600 MB Eindhoven
The Netherlands
w.m.p.v.d.aalst@tue.nl

Presentation Summary

Although simulation is typically considered as relevant and highly applicable, in reality the use of simulation is limited. Many organizations have tried to use simulation to analyze their business processes at some stage. However, few are using simulation in a structured and effective manner. This may be caused by a lack of training and limitations of existing tools, but in this talk we will argue that there are also several additional and more fundamental problems. First of all, the focus is mainly on design while managers would also like to use simulation for operational decision making (solving the concrete problem at hand rather than some abstract future problem). Second, there is limited support for using existing artifacts such as historic data and workflow schemas. Third, the behavior of resources is modeled in a rather naive manner. This keynote will discuss these problems and show solutions that are based on using process mining results and improved modeling of resources. By incorporating better resource characterizations in contemporary tools, business process simulation can finally deliver on its outstanding promise.

Brief Biography

Prof.dr.ir. Wil van der Aalst is a full professor of Information Systems at the Technische Universiteit Eindhoven (TU/e) having a position in both the Department of Mathematics and Computer Science and the Department of Technology Management. Currently he is also an adjunct professor at Queensland University of Technology (QUT) working within the BPM group there. His research interests include workflow management, process mining, Petri nets, business process management, process modeling, and process analysis. Wil van der Aalst has published more than 115 journal papers, 15 books (as author or editor), 230 refereed conference/workshop publications, and 40 book chapters. Many of his papers are highly cited (he has an H-index of more than 70 according to Google Scholar, making him the Dutch computer scientist with the highest H-index) and his ideas have influenced researchers, software developers, and standardization committees working

on process support. He has been a co-chair of many conferences including the Business Process Management conference, the International Conference on Cooperative Information Systems, the International conference on the Application and Theory of Petri Nets, and the IEEE International Conference on Services Computing. He is also editor/member of the editorial board of several journals, including the Distributed and Parallel Databases, the International Journal of Business Process Integration and Management, the International Journal on Enterprise Modelling and Information Systems Architectures, Computers in Industry, Business & Information Systems Engineering, IEEE Transactions on Services Computing, Lecture Notes in Business Information Processing, and Transactions on Petri Nets and Other Models of Concurrency. He is also a member of the Royal Holland Society of Sciences and Humanities (Koninklijke Hollandsche Maatschappij der Wetenschappen).