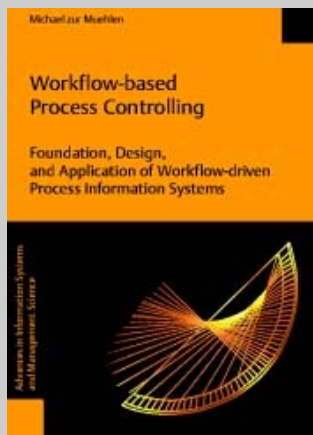


October 2004



Workflow-based Process Controlling: Foundation, Design, and Application of workflow-driven Process Information Systems

Michael zur Muehlen

**Logos Verlag Berlin, 2004
40.50 Euros. 315 pages**

by Paul Harmon

There is considerable interest in BPM systems at the moment. Broadly, the hope is that processes can be defined and that BPM engines can then use the models to actively control the process when they are executed.

The best known book on BPM is undoubtedly Howard Smith and Peter Fingar's *Business Process Management: The Third Wave*. It provides an very enthusiastic introduction to the basic idea of BPM, and is still the best introductory book for business managers new to the subject. Unfortunately, Smith and Fingar tried to make a distinction between workflow systems, that have been around for years, and BPM, in order to suggest that BPM is somehow different and more exciting than workflow. In fact, there is no sharp distinction between BPM and workflow and Smith and Fingar's work has led to considerable confusion in the market. Obviously, what a business manager is interested in is not whether an application is called a BPM system or a workflow system, but what the application will do for the business. Michael zur Muehlen avoids semantic quibbles by stating, at the beginning, that he is concerned with "Workflow management systems (also known as Business Process Management Systems)..."

Where *BPM: The Third Wave* was addressed to business managers, zur Muehlen is writing for IT managers and developers. As he explains it, the goal of his book is : " the development of a reference architecture for process information systems that utilize operational information generated by workflow management systems. This controlling infrastructure is designed to enhance traditional enterprise controlling instruments to provide a holistic and process-oriented view of enterprise operations. In order to achieve this goal, it is necessary to have both a methodical discussion about data that can be successfully gathered from a workflow infrastructure, and a conceptual discussion about how this data can be integrated into the management information infrastructure of a company. The purpose of the methodical discussion is the development of a taxonomy of controlling information required by process participants and managers at different levels."

Anyone who has looked that the current crop of BPM suites knows that most are strongest at representing processes and automating the execution of those processes. Most are not nearly as strong at summarizing the data resulting from the execution of the processes and presenting that data to decision makers. Nor are most designed to integrate the data resulting from processes with data derived from a variety of ERP systems. Almost all of the workflow/BPM systems audit the flow of events between activities. Thus, raw data about what is happening, as the process is executed, is readily available. Raw data of this kind, however, is most useful to IT systems managers who want to tune the software or to immediate supervisors who can make sense out of the raw data. It isn't data that could be presented to a middle or senior manager to aid such an individual in making business decisions. The techniques for summarizing or filtering raw data and presenting it in useful ways is the major subject of zur Muehlen's book, and the results will be interesting to anyone working in the workflow/BPM systems arena, on anyone involved with BAM, BI and Data Warehouses, since these are



all involved in the solution..

Workflow-based Process Controlling was originally developed as a dissertation. It was reworked for two years before its release as a commercial book, but the academic roots show and that is part of its value. This book provides a very systematic history of the field and carefully develops all the key terms. It has an extensive bibliography that points to the technical literature underlying workflow systems. zur Muehlen notes how quickly the field is evolving and explains that in several cases he had to change sections of the book to keep up with changes in the market. He considers the work of the OMG, for example, but only describes UML 1.n, not UML 2.0, and doesn't even mention MDA. Similarly, he references Smith and Fingar, but doesn't reference Robin Milner or describe pi calculus. I mention this only to say that this is not a comprehensive treatment of all technical aspects of workflow and BPM, but it is still a rather impressive survey, and it is very comprehensive in the area on which it focuses -- monitoring processes and reporting results.

Workflow-based Process Controlling begins with a description of the problem. It then examines the underlying technologies used in workflow/BPM systems. This discussion begins as an abstraction discussion but eventually moves on to a detailed examination of the metamodels used by different popular products. (zur Muehlen looks especially carefully at IBM's MQSeries Workflow, Staffware 2000, and the Carnot Process Engine.) zur Muehlen proceeds to examine a wide range of workflow/BPM standards to see what they offer, and then settles down to the real work of this book, an examination of workflow auditing, how audit data can be handled, and what problems companies face as they try to filter and prepare it for presentation to middle and senior managers or integrate it with existing decision information systems. zur Muehlen eventually offers his own cybernetic model for organizing monitoring, and then works through a case study using a prototype to show how his approach would work in practice. As an aside, zur Muehlen leans on the Balanced Scorecard approach of Kaplan and Norton as a way of thinking about what kinds of information senior managers might need.

The case study was undertaken in conjunction with a German insurance company and involved the integration of BPM/workflow, a transaction processing system, a data warehouse, and an Activity-Based Costing system.

In spite of a well-documented approach, this book doesn't offer a generic solution that everyone can easily adopt. Instead, it offers a thoughtful overview of the problem and a very intelligent discussion of what kind of an approach will be required to really create workflow/BPM systems that provide practical process monitoring, can integrate with popular ERP information systems, and can aid in managerial decision making. If you are concerned with the development of process monitoring and control systems, you will definitely want to study this book. If you simply want a good overview of the workflow/BPM technology, and pointers to the important literature, this book would still be valuable.

The title and the German origin of this book suggest that it might be heavy going for English readers, but, in fact, the text is straight-forward and easy to read. I do have one serious quibble with *Workflow-based Process Controlling*: It lacks an



index, which makes it hard to find items quickly.

Workflow-based Process Controlling is published by Logos Verlag Berlin, a small publisher that specializes in technical books. It is not available on Amazon.com in the US or UK, but is available on the German language www.amazon.de. The easiest way to get the book is to go directly to the publisher's site, which has an English language option. <http://www.logos-verlag.de/englisch>

Michael zur Muehlen is currently Assistant Professor of Information Systems at Stevens Institute of Technology at Hoboken, NJ, where he directs the SAP/IDS Center of Excellence in Business Process Innovation. He can be contacted at michael@workflow-research.de

