

BOOK REVIEWS

Re-engineering the Enterprise

edited by Jim Browne and David O'Sullivan
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Dr. Florin-Gheorghe Filip was born in Bucharest, Romania, in 1947. He graduated in Control Engineering and took his Dr.Engng. Sci. for his contributions to hierarchical control from the Polytechnical Institute of Bucharest in 1970 and 1981 respectively. In 1970 Dr. Filip joined the Research Institute for Informatics, Bucharest. He was the head of Advanced Decision Support Systems Research Laboratory. Since May 1991 Dr. Filip has been general director of the institute.

In 1974 he was an invited research fellow at Swedish universities (Chalmers TH Goteborg, Uppsala Universit t, TH i Lund, KTH Stockholm). In 1995 he was trained in research management at FhG IITB Karlsruhe, Germany.

In December 1991, Dr. Filip was elected as a corresponding member of the Romanian Academy. He is a member of the IT Section of the Romanian Academy.

Dr. Filip is the author/co-author of over one hundred fifty technical papers published in contribution books and international scientific journals such as IFAC J. Automatica, Contr. Engng. Practice, Large Scale Systems, Computers in Industry, Modelling & Simulation, Syst. Anal. Model. and Simul., etc. He co-authored three books: "Cybernetics, Automation and Informatics in the Chemical Industry" (1979), and "Hierarchical Real-time Systems" (1986), "Industrial Informatics" (1997).

His main current scientific interests include: modelling and simulation, hierarchical optimisation and control of large scale systems, decision support systems, integrated plant control in process industries and discrete part manufacturing, information systems in public administration, BPR and IT technology transfer.

The business landscape of the present day is fast changing due to various factors and processes such as new geo-political and societal evolutions, severe competition and *information and communication technology* (ICT) advances

An emerging term namely (*business*) *process reengineering* (BPR) apparently describes an ever increasing movement towards adapting the Western enterprise to the new conditions and opportunities, so that an adequate answer should be given to the Japan-based ways of doing business, and the Western world spirit

and strengths should be exploited. Today not only are business processes re-engineered but many other things tend to be re-engineered, for example governments.

BPR, which, for many people, is associated with the successful and seminal book of M. Hammer and J.Champy (**Reengineering the Corporation; A Manifesto for Business Revolution**, Harper Business, 1993) is probably not an invention, as one of the authors once admitted, but a discovery. It is an effective name to draw attention of managers at all levels. At the same time, BPR is apparently a very convincing flag to sway for gathering people from consulting groups, IT industry or academia involved in a movement that actually started even earlier, in the late 1980's.

There have already been made many contributions to this movement, and a significant portion of practical results (successes or failures) can be noticed. However, at present there are many definitions of BPR and as yet no single view or single authority could be accepted by *all* the participants in the BPR movement.

This book is a timely presentation of various perspectives, approaches and results in the BPR field. It offers a selection of the papers presented at IFIP TC5/WG 5.7 Working Conference on Re-engineering the Enterprise, which was held at Galway (Ireland) in April 1995. The book contains 31 chapters. The papers originate from the European Union (Germany-11, UK-4, France-1, Finland-3, Italy-2, Ireland-1, The Netherlands-1, Spain-1). The book also contains one paper from Norway, one paper from Switzerland, three papers from Canada and one paper from the USA. The majority of the authors are leading experts in the manufacturing and BPR fields.

Some papers make very useful comparisons of different BPR approaches. Other papers address process and factory modelling issues, applications, adaptations or extensions of the

existing techniques (e.g. the GRAI method, or first-order logic, or object -orientation). Logistics problems, or benchmarking and performance measurement issues are specifically addressed. A number of European and national projects are described and several IT solutions and tools are evaluated. Numerous case studies or applications in discrete manufacturing, continuous process industry, defence industry, construction industry, insurance companies or "knowledge work" are given to sustain the proposed ideas and concepts.

This is a very dense book and, therefore, it is not possible for us to mention *all* the valuable contributions in it. Instead, *this* reviewer planned to find and present in the review section of *this* journal answers to a few key questions such as:

- (a) Is process orientation thinking adopted by all the authors?
- (b) Is BPR a radical process or an incremental one?
- (c) How important is IT in the BPR movement? Is IT a "means or an end?"

As to the first question, it has been noticed that process oriented thinking is a common feature of all the approaches made. Two particular related issues are worth mentioning: the need for considering multiple processes for re-engineering the enterprise (see the contribution of Doumeingts et al, from LAP-GRAI Grenoble) and the anthropocentric dimension of BPR (see the contribution of Scherer and Zölch from ETH Zürich).

Many authors state that BPR must be radical, but there are many others who are aware of the legacy systems and are not willing to adopt the "clean sheet" approach recommended by Hammer and Champy. Moreover, references to incremental Japan-based approaches such as "kanaban" and "lean manufacturing" are made.

The third question this reviewer tried to answer was determined by the fact that, as any other new and fashioned term, BPR can be used as a new label by IT vendors or consultant groups for rendering their products and services more attractive. As this book shows, most of the

authors consider IT as an *essential* enabler. One of the most convincing examples of competitive advantages offered by key information and communication technologies is the evolution of ABB (see Chapter 2.2 due to Popplewell and Bell). At the same time, one author (G. Lyons) says " BPR has been synonymous with the rational applications of ICT". He also completed Drucker's statement when saying: "Yet, despite the enormous investment in ICT throughout 1970's and 1980's, there is little tangible result in terms of observable productivity at least not before the emergence of BPR "(page 48).

It is the merit of the volume editors, two authorities in the manufacturing field, to provide the reader with such a selection of high quality papers, all within the scope of BPR mainstream, but for one or two possible papers. However, this reviewer would have expected more introductory comments and a more obvious structuring of the volume, in order to better guide the readers (especially those who are novice in BPR) in the extremely dense and diversified content of the book.

This book is, in this reviewer's opinion a valuable source of up-to-date information on BPR for several categories of readers. The academia people may find it helpful in orientating their researchers and in updating their courseware in business administration and in computer applications. Managers and more probably people in the computer departments of enterprises, who are, in many cases, the initiators of BPR (see Chapter 14), can find this book, with plenty of examples, an adequate and inspiring one, to help them start and possibly solve their particular situation. Software houses and consulting groups may find this book a helpful source of requirements and inspiration in their efforts for producing performant software tools and "cook books" respectively.

In conclusion, this reviewer thinks of this as a serious book, rich in content and providing both the novice and the more advanced reader with significant insights into modern business.

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