

# Introduction

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Welcome to the Workflow Handbook 2003. This landmark 10<sup>th</sup> anniversary edition offers you three sections:

**SECTION 1: The World of Workflow** covers a wide spectrum of viewpoints and discussions by experts in their respective fields. Papers range from an uncomplicated definition of the technology, architecture styles, the importance of Web Services, adaptive workflow in a distributed environment, group applications, Business Activity Management to discussions on emerging technologies.

**SECTION 2: Workflow Standards** deals with the importance of standards, and includes discussions and examples on the importance and deployment of standards, specifically the new XPD L specification recently published by the Coalition's Technical Committee. The specification is published in full on the Coalition website.

**SECTION 3: Directory and Appendices** provide an explanation of the structure of the Workflow Management Coalition, and include an authors' appendix, WfMC officers and a membership directory.

## SECTION 1—THE WORLD OF WORKFLOW

- ***Workflow and Process Management: Carol Prior, Maestro BPE Pty Limited, Australia***

The introductory paper discusses the motivations and benefits in moving to workflow of business processes, and considers workflow architecture styles and how they "fit" the business requirements. The experiences of a Government body are used to investigate different aspects and outlooks on workflow, its uses, expectations and outcomes. The introduction of formal workflow principles and technology provides an opportunity to improve the management of the business process and the capacity to develop a business process to a defined and measured level of maturity.

- ***Group Applications: From Workflow to Work Management: Martin Ader, W&GS, France***

Group applications will evolve and combine together to form a fundamentally new way of supporting collaborative work by assembling traditional applications (workflow, Groupware, collaboration, Knowledge Management) into a pervasive computing architecture supporting all the facets of information work: from its bulk part based upon structured processes, up to its collective advanced creative part. This will drastically change organization of work, as well as conceptual view of work itself, that will shift from individual contribution measurement to group outcome efficiency analysis. Work management, mixing new group support applications with new group oriented organization methodologies and management, will strongly impact the economy through significant productivity progresses, as well as enhanced professional inventiveness, and managers' effectiveness.

- ***Best Practices in Workflow: Connie Moore, Giga Information Group, United States***

This article looks at the challenges, pitfalls, lessons learned and best practices for business process management/workflow projects. Practical advice will be given, based upon an analysis of numerous case studies, discussions with systems integrators specializing in workflow and discussions with workflow and business process modeling vendors. Topics to be covered include best practices in planning, analysis, design, implementation and staffing workflow projects.

- ***Web Services and Workflow—a Unified Approach: Heinz Lienhard, ivyTeam, Switzerland***

We propose to implement Web services and workflows directly from a graphical process model, thus bringing together the two worlds in a single coherent approach. This leads to fully recursive Web Services which also enable interaction with people. There is general agreement: Web Services are of tremendous value when dealing with EAI (Enterprise Application Integration), particularly for Business-to-Business commerce and system integration.

- ***The Continuity between Design and Implementation: Nathalie Génieux and Dominique Montel, W4, France***

This paper shows that it is now possible to use a high level Business Process Analysis and Modeling tool (BPA/M) combined with a Business Process Management (BPM) engine to design, implement and optimize a real world BPM application running on any of the industry standard platforms: J2EE/JSP, COM/ASP or .NET/ASPX. Users of high level modeling tools can now expect that BPM applications be built by direct refinement of their graphical specifications. Iterative design can still be used effectively, with business experts, process experts and programmers working together, each using their preferred tool.

- ***Optimization of Workflow Performance through Business Process and Architecture Alignment: A Simulation Approach: Jon Weyland, CACI, USA***

Workflow performance is dependent on the successful alignment of systems architecture with planned business processes. Simulation offers a way to explore and optimize this alignment. This paper explores how workflow performance can be improved through an approach that aligns the network architecture with an organization's business processes. Simulation is examined as a way to optimize this alignment. We consider that there are three layers to this issue: business processes, network architecture, and the workflow application. Each layer will be considered, followed by a look at the central alignment problem.

- ***Business Processes and Business Rules: Business Agility Becomes Real: Jean Faget, W4, France; Mike Marin, FileNET, USA; Patrick Mégard, ILOG, France; Vincent J. Owens, Cap Gemini Ernst & Young, USA; Laurent Tarin, ILOG, France***

Agility is today's hottest buzzword; however, it is not a well-defined term. Most vendors today use agility as the key value proposition for their products. This introduces confusion in the market, because the products do not present a consistent definition of agility. This paper will define agility within the context of workflow, business processes and business rules engines. An in-depth

study of how workflow and business process tools can integrate with business rules tools to achieve business agility will be presented. Several use cases and architectures will also be presented.

- ***Formal Support for Adaptive Workflow Systems in a Distributed Environment: Yun-Heh Chen-Burger and Jussi Stader, AIAI, the University of Edinburgh, United Kingdom***

To achieve more widespread application, Workflow Management Systems (WfMS) need to be developed to operate in dynamic environments where they are expected to ensure that users are supported in performing flexible and creative tasks while maintaining organisational norms [Alonso et al, 1997; Sheth & Kochut, 1997]. In order to cope with these demands, the systems must provide knowledge about the business process itself and the organisational context in that these processes operate [Jarvis et al, 1999]. It, however, is not an easy task to provide the appropriate and sufficient knowledge at the right level of abstraction that supports a workflow system at all stages of operation in a dynamic environment and for different types of users.

- ***Web-extended Business Process Management: David Lakness, eiStream Technologies, Inc., USA***

The premise of this paper is that Web-extended business process management (BPM) is the key to attracting, capturing, and retaining greater numbers of customers. In addition, we will show that it is also an important means to ensure compliance with regulatory and legal mandates for long-term audit requirements. The paper will explore the concept of having an enterprise-class business process management system as the driving force behind a new breed of Web services, examining how such an environment can be achieved and the business impact it would have on an organization. Our discussion will also show that BPM and workflow are no longer mutually exclusive, but rather that true BPM is what results from advanced workflow-driven process automation.

- ***Information Drives Change—Integrated Business Process Management and the Enterprise Dial-tone: Scott G Opitz, webMethods, Inc., USA***

The separate spaces of BPM, Workflow and Integration have each been increasingly adopting the language, theories and principles of the others. These spaces are coalescing not because they achieved everything they set out to accomplish on their own, but because they are all working independently toward the same goal – global business visibility. As corporations demand this more comprehensive visibility into their business processes, with full representation of their human and application participants, individual point solutions will fall to the wayside in favor of all-inclusive, enterprise-class infrastructure offerings. This article submission will explore the ways in which EAI, BPM and Workflow will benefit from their convergence, with the major premise being that this is, in fact, the last mile of integration. Scenarios will be offered which will elucidate the advantages to be gained from this imminent advancement of EAI.

- ***Straight Through Processing: Part 1—A fiasco without Workflow? Jeroen Stoffele and Fred van Leeuwen DCE Consultants, The Netherlands***

These two papers have been written in the form of a debate between a workflow specialist and an expert in securities packages and their practical application. An international market survey into the introduction of Straight Through

Processing for improving business chains in the securities industries pointed out that there is increasing interest in applying workflow to support STP. The article investigates in which of these securities processes, workflow would create most value. It specifies the type of added value that can be achieved in each of the processes. The article mentions standards as a pre-requisite for success, it identifies the major standardisation initiatives in STP and concludes that the securities industry should become more aware of existing workflow standards to prevent dead-end streets in STP introduction.

- ***Straight Through Processing and Workflow in Securities Trading: Part 2—What Can Workflow Add? Fred van Leeuwen, and Jeroen Stoffele, DCE Consultants, The Netherlands***

This article extends on the subject, by investigating the actual state-of-the-art in applying workflow as a means to achieve STP in the securities industry. It identifies three categories of specialised application packages and investigates to which extent and in what way these packages are implementing workflow functionality on top of the existing application logic. It concludes a lack of standards and points out the risks of this situation for users of these packages. It identifies actions these users should take, to minimise the risk.

- ***The Intelligent Enterprise Infrastructure: Mike D. Gilger, Identitech, United States***

Business managers are always seeking better ways to manage and control their businesses. Formal management methods such as balanced scorecards, key performance indicators, and return on investment (ROI) metrics can help improve the speed and effectiveness of business operations; however several issues, such as information collection latency and inadequate informational delivery, create barriers to their successful implementation within an enterprise. This presents a significant organizational challenge—to provide a methodology and infrastructure for delivering the correct information to the correct people (or process) in a clear and timely way that is actionable. This is the premise for what analysts call the Intelligent Enterprise. This paper will explore how an intelligent enterprise strategy and technology infrastructure ensures that accurate and timely information are effectively incorporated into the decision-making process so that organizations can exploit this information through process-, knowledge-, and visualization-based technologies to manage their business effectively.

- ***Emerging Technologies—Where the Market is Headed: Jon Pyke, Staffware Plc, United Kingdom***

This paper sets out to explain and, to some extent, put into context, a number rapidly emerging technologies in the world of IT. These technologies, when taken in isolation, are significant—but when combined, have the potential to dramatically liberate all users of information technology (IT) from the copper-bound, expensive suit of chains that it has become. These technologies, when they mature, will enable organizations to dynamically find, develop and tap into the services, systems and resources they need to support their business objectives and goals.

## SECTION 2—WORKFLOW STANDARDS

- ***B2B Interoperability through Presentation Level Integration: Alan Rickayzen, SAP AG. Germany and Keith Swenson, Fujitsu Software Inc., USA***

While business-to-business (B2B) integration of business processes is highly desirable, most discussions of the solution revolve around data level integration where process status and properties are passed between the cooperating businesses. This approach has some serious limitations and is in complete contradiction to the billions of dollars that are spent on online vendors' user interfaces. Instead, we propose that B2B integration be done through both data level and presentation level integration so that not only data and process status are shared, but also the user interfaces can be integrated together. This leads to savings for the customer and gives the vendors with good user interfaces a competitive edge.

- ***Managing the Compliance of Dynamic and Complex Processes: Paul W.H. Chung and Larry Y.C. Cheung, United Kingdom***

One serious limitation of current workflow systems is the lack of the ability to ensure the specification and the execution of a process is compliant with a standard. This paper presents the treatment of managing process compliance in the Compliance Flow system. Process-based reasoning is used to identify compliance errors of a user-defined process by matching it against the standard model during both process specification and process execution. Examples drawing on a draft version of IEC61508 are used to illustrate the mechanism of modeling and compliance checks. In addition, some critical issues related to system implementation are discussed.

- ***XPDL and BPMN: Stephen A. White, SeeBeyond, USA***

The Business Process Modeling Notation (BPMN) specification provides a graphical notation for expressing business processes in a Business Process Diagram (BPD). The objective of BPMN is to support process management by both technical users and business users by providing a notation that is intuitive to business users yet able to represent complex process semantics. The BPMN specification also provides a mapping between the graphics of the notation to underlying the constructs of execution languages, such as BPEL4WS and Business Process Management Language (BPML).

- ***XPDL in Action: Arnaud Bezancon, ADVANTYS, France***

Having developed their own workflow solution based on the WfMC concepts and model, Advantys sought an upgradeable and open technical solution to store process definitions. Their existing product allows users to define and execute processes. The process definition is stored in a relational database, which has the advantage of improving performance and simplifying processing. Despite this, they still needed a storage solution for the process definition, which could provide additional abilities.

- ***Integrating Warehouse Process Flows in the Heterogeneous Environment: Jean-Pierre Dijcks, Oracle Corporation, United States***

Integrating **data** warehouse process flows is typically a problem. The current implementations offer only partial solutions to the problem. The most common implementations have serious drawbacks. Using open standards within warehouse design tools like Oracle Warehouse Builder addresses this problem by

allowing complete integration of the warehouse process flows in the operational process flows.

- ***Getting Started with Workflow: Charles Plesums, CSC Financial Services, United States***

The rapid evolution of new standards and technology has created a confusing environment for someone just getting started. The roles of some of the new technologies are discussed, to help distinguish between products that have a workflow management base and similar technologies emerging from the Business Process Management base, and why to choose one or the other. Many of the common standards and tools are listed, with a brief description of the role of each since there are many components, not one great standard that incorporates all process management and workflow. But no matter what the choices, the ultimate goal is to get started and get the business benefits that come from this technology.

- ***The WfMC Glossary: Compiled by Dave Hollingsworth, chair WfMC Technical Committee, Fujitsu Services Pathway, United Kingdom***

**The WfMC Glossary** contains technical definitions for terms used in the workflow management coalition specifications and discussions. The Workflow Reference Model, published in last year's Handbook can also be downloaded from the WfMC website.

### SECTION 3—DIRECTORY AND APPENDICES

- The **Authors' Appendix** provides the contact details and biographies of the contributors to this book. You may contact them if you wish to pursue a discussion on their topic.
- The chapters listing the **Officers and Fellows** together with the section on the **WfMC Structure and Membership** describe the Coalition's background, achievements and membership structure and sets out the contractual rights and obligations between members and the Coalition
- **WfMC Member Directory:** WfMC members in good standing as of December 2002 are listed here. Full (Funding) Members have the additional benefit of including details on their products or services.

The WfMC invites you to delve into the information presented in whatever manner suits your reading or research style and knowledge level.

Our thanks and acknowledgements extend to not only the authors whose papers are published in this Handbook, but also to the many more that could not be published due to lack of space.

Selected papers and case studies are available for free download from our sister website [www.e-workflow.org](http://www.e-workflow.org) if you wish to continue your reading and research on the topic of workflow.

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