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workflow technology is the core technology for realizing the automation of business processes. It is the key technology for realizing the automation of business processes. Through modeling and in-depth analysis, not only can the business processes of enterprises be standardized, and unreasonable links in the business processes be found, but also can the business processes of enterprises be optimized and reorganized, and the business process model itself is an important knowledge base and rule base for enterprises. It can be used as a model for guiding enterprises to implement computer management information systems. On the basis of in-depth analysis of enterprise needs, the established enterprise business model can improve the success rate of enterprise implementation of ERP or other management information systems to the greatest extent. So, the development and promotion of workflow technology for promoting the standardization and informatization of enterprise management has important practical significance.

workflow management technology as a core technology for process modeling and process management, can be effectively combined with other application systems to generate various business management systems that meet enterprise needs, such as office automation systems, project management software, PDM systems, customer relationship management systems, supply chain management systems, ERP systems, etc. These systems use workflow technology as the core of the business management system. The maximum feature of these systems is also the maximum difference from ordinary application software systems, which is that they have a high degree of flexibility, can be generated according to the specific needs of enterprises, and can be quickly and flexibly generated into application software systems, and can be quickly reorganized to meet customer needs when the business process changes.

workflow management technology has emerged and developed rapidly, meeting the objective needs of enterprise organizational structure reorganization and advanced manufacturing strategy implementation. Its emergence has also promoted the level of computer application in enterprises to a new stage, from supporting enterprise functional transaction processing systems to supporting enterprise business processing systems that achieve business goals, so, some people call workflow management systems the business operating system (BOS) of enterprises.

At present, the research and application of workflow technology in our country is still in the initial stage, although there are many researchers from different angles who have carried out research on workflow management and its related technologies, but the many key technical problems are still in the exploration stage. In view of the current situation of workflow management technology products and development trends, combined with the author's achievements in workflow management technology research in recent years, this book introduces the background, basic concepts, system structure, implementation methods, and implementation strategies of workflow management systems in a comprehensive way. In addition, this book also carries out in-depth discussions on some key technical problems in the research and application of workflow management technology, such as enterprise needs, workflow modeling, workflow execution, application integration mechanism, process integration method and process automation, workflow technology in enterprise business process reorganization and its application in CIMS, etc., and introduces the author's design and development of workflow management systems based on CORBA and

WEB 技术的分布式 workflow management system CIMFlow 的设计与实现技术。

本书为有志于从事 workflow management technology 的研究人员全面了解 workflow management technology 提供了详细的科研资料，是研究人员开展深入研究的基础。本书也可以作为企业实施经营过程重组和 workflow management system 的参考资料，还可以作为计算机、自动化、机械制造专业的研究生学习 workflow management technology 的教材使用。

在本书的写作过程中，得到了清华大学自动化系吴澄院士的大力支持。吴澄院士不仅大力推荐了本书的出版，还对项目组开展 workflow 及其相关技术的研究提供了全面的指导和支持。在此，衷心地感谢吴澄院士的支持和帮助。衷心感谢德国帕德波恩大学经营计算系 Ludwig Nastansky 教授、张红博士、王蓓女士，对他们为编写本书第 5.5 节付出的辛勤劳动和在工作流技术上开展的有益讨论表示衷心的感谢。衷心感谢清华大学自动化系熊光楞教授的支持和帮助。作者还要衷心感谢作者的同事们和研究生们在工作流 management technology 的研究开发上所作出的贡献和对本书的写作所提供的支持。作为我国第一本全面介绍 workflow management technology 的书，作者力图客观全面地向读者介绍 workflow management 这个新兴技术，书中的许多内容是作者研究开发工作的体会。由于 workflow technology 还正处在迅速发展阶段和作者本身的水平所限，书中的缺点和错误在所难免，欢迎广大读者批评指正。

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