

研发、设计、测试

大型水电仿真系统的模型驱动架构设计

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摘要 介绍了基于模型驱动架构设计的水电仿真软件开发框架, 以UML 作为面向对象建模工具, 从更高的抽象层次上构建系统, 描述和总结了系统的功能组成、模型结构与层次、模型变换及代码生成, 避免传统开发的缺陷, 使对系统的建模行为成为软件开发的核心。以吉林丰满水电站为用户案例, 对系统进行应用测试, 实践验证了该方法的通用性、先进性和可靠性, 是一种适合实现水电仿真系统等大规模软件开发的新方法。

关键词 [模型驱动](#) [水电仿真](#) [统一建模语言](#)

分类号

Design of model driven architecture about large hydropower simulation system

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Abstract

A development frame of hydropower simulation system has been introduced based on model driven architecture, it takes UML as the object-oriented modeling tool, constructs the system from a higher abstract level, describes and summarizes the function, model structure and level, model transformation and code generation, avoids the flaw of the traditional development, makes system modeling become the core of software development. As a case study, the frame has been tested in Fengman Hydropower Station, Jilin province. The generality, advantage and credibility of the system are validated through this experiment; the new method is suitable to realize the large-scale software development, such as hydropower simulation system.

Key words [Model Driven Architecture \(MDA\)](#) [hydropower simulation](#) [Unified Modeling Language \(UML\)](#)

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