工程与应用

基于ArcEngine网络模型的水资源优化配置系统开发

董贵明[1], 束龙仓[1], 陈南祥[2], 田 娟[1]

1.河海大学 水资源环境学院，南京 210098
2.华北水利水电学院 岩土工程系，郑州 450008

摘要　　把ESRI公司的ArcEngine（ArcGIS Engine）组件库中的网络模型应用到水资源优化配置系统开发过程中。重点介绍了ArcEngine网络模型的体系结构、关键技术、开发步骤。以ArcEngine网络模型在南水北调中线河南受水区水资源优化配置系统开发中的应用为例，对具体功能的实现做出了分析。开发实例表明，ArcEngine网络模型在水资源优化配置系统开发中充分发挥了GIS的空间分析功能，实现了系统中GIS模型和专业模型的耦合。

关键词　　ArcGIS Engine　GIS　网络模型　水资源优化配置　系统开发　南水北调

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System development of optimal allocation of water resources based on network model ArcEngine

DONG Gui-ming[1],SHU Long-cang[1],CHEN Nan-xiang[2],TIAN Juan[1]

1.College of Water Resources and Environment，Hohai University，Nanjing 210098，China
2.North China University of Water Conservancy and Electric Power，Zhengzhou 450008，China

Abstract

  The network model ArcEngine，which is included in ArcGIS Engine module library of company ESRI，is applied to the system development of optimal allocation of water resources.This paper introduced it's architecture，key technique and development process.Moreover，the paper analyzed the realization of it's specific function by it's application in the system development of water resources of the water-received areas in Zhengzhou，Henan Province，which is one part of the middle route of South to North Water Transferring Projection in China.The development case shows that this model exploited GIS space analytical function，and made a couple of system model GIS and professional model.

Key words　ArcGIS Engine　GIS　network model　optimal allocation of water resources　system development　south to north water transferring projection

通讯作者　董贵明 guiming14432@126.com