学术研究

iViewer：利用数据服务即时生成跨域数据视图

温 彦，刘 晨，韩燕波

1. 中国科学院 研究生院, 北京 100190
2. 中国科学院 计算技术研究所 软件集成与服务计算研究分中心, 北京 100190

摘要　越来越多的企业和组织选择通过广域、开放的互联网作为其协作平台，业务决策者往往需要即时汇聚并综合分析来自多个部门的资源信息以进行临机决策。如何即时构建满足用户需求的跨组织数据视图，动态维护视图和数据源之间的一致性是需要求解的一个关键问题。提出了一种互联网环境下跨组织业务数据视图的动态生成方法iViewer，利用数据服务来封装自治、异构和动态变化的数据源；通过可视化和易用的数据服务组合操作来动态构建数据视图；提出了一种基于轮询的视图动态更新算法，维护数据源和数据视图的一致性，从而使得数据视图能够随随数据源的变化而自主变化；详述了iViewer方法的原理和过程，并通过一个火灾应急处置场景中，面向指挥中心的跨部门火灾救援设备数据视图的动态生成过程例证了iViewer方法的效果。

关键词　　数据服务　数据视图　跨组织数据　即时构建　视图维护

分类号

iViewer: Service-Based View Construction Method for Just-in-Time Sharing
Business Data across Organizations

WEN Yan, LIU Chen, HAN Yanbo

1. Graduate University of Chinese Academy of Sciences, Beijing 100190, China 2. Software Integration and Service Computing Branch Research Center, Institute of Computing Technology, Chi-nese Academy of Sciences, Beijing 100190, China

Abstract
Today, more and more enterprises and organizations choose to depend on the Internet to realize business collaborations. For business users, they often need to gather and analyze information from multiple organizations correctly and immediately to make improvisations. Key issues behind this process are how to construct cross-organizational data views in a just-in-time way and maintain the consistency between data views and sources. This paper proposes a dynamic cross-organizational view construction method fitting in with the Internet environment, called iViewer. The main ideas of iViewer method are to encapsulate autonomous and heterogeneous data sources as a set of data services, and compose them to generate a data view in a visualized and user-friendly way. It develops a polling based view updating algorithm to maintain the consistency between the data views and sources, so that the data view can be updated as the data sources get changed. The paper discusses the principles and procedures of iViewer in detail, and proves the effects of the iViewer method in practical "fire-emergency-equipments-dispatching" case, in which a cross-organizational view of fire rescuing equipment information from multiple departments is dynamically constructed for the command center.

Key words　　data service　data view　cross-organizational data　just-in-time construction　view maintenance

DOI:

通讯作者

扩展功能

本文信息
- Supporting info
- PDF(558KB)
- [HTML全文](0KB)
- 参考文献

服务与反馈
- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 复制索引
- Email Alert
- 文章反馈
- 浏览反馈信息

相关信息
- 本刊中 包含"数据服务"的相关文章
- 本文作者相关文章
- · 温 彦
- · 刘 晨
- · 韩燕波