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多源地学信息系统数据格式交换研究及软件实现

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摘要: 减少数据的重复浪费, 实现数据共享, 是地理信息系统的基本目标之一。多源地学信息系统的数据来源不但涵盖地质、物探、化探、遥感等各种不同的学科领域, 而且数据格式各异。要实现多源地学信息系统与上述这些格式数据的共享, 必须研制相应的数据交换软件。为此, 作者通过对多源地学信息系统数据格式与国家标准格式、野外实测成果数据格式进行分析比较, 并对它们间的差异进行了综合整理, 给出了研制数据交换软件的2种设计方案。通过方案的优化选择, 确立了通用数据交换方案; 利用Visual C++语言及ODBC技术, 实现了通用数据交换软件的开发, 对不同数据源、不同数据库管理系统的数据进行了测试。实践结果表明: 转换效果良好, 说明该软件不但适用面广, 而且具有一定的实用价值。

关键字: 多源地学信息系统; 数据格式; 数据交换; 软件

Data interchange software of multi-source geoscientific information system for mineral resources

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Abstract: It is one of the goals of GIS to reduce the repetition and waste of data and to realize the data sharing. Not only does the data source of multi-source geoscientific information system cover many fields but also has quite a few kinds of data formats. And the formats of multi-source geoscientific information system differ from any kinds above. So there is a question of data sharing. It is necessary to develop a data transformation software to solve this problem. In this paper, the difference of three kinds of data formats were analyzed, and two design schemes for the software were put forward and the general data interchange scheme was adopted. In addition, using the Visual C++ programming language and ODBC technique, the general data interchange software was implemented which was later tested by some practical instances and its practicability and reliability were proved.

Key words: multi-source geoscientific information system; data format; data transformation; software

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