

Managing and Publishing Relational Database via VisualDB

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Abstract:

This paper introduces VisualDB, a tool developed by CNIC(Computer Network Information Center, CAS), which aims at management and publishing of relational database with web UI. The main objective of this work is to aid data owners to manage and publish their data in customized styles by following simple steps and to help developers to develop applications more easily without worrying about physical issues such as database connection handling, object-relation mapping and so on. Now, VisualDB is applied in more than 20 web applications on scientific data cover nano materials, chemical toxicant, ecological environment and so on.

In the first part, this paper introduces the purposes and architecture of VisualDB, including its DataSetModeler, DataForge, SQLView, vReports, VDBServices, SecurityCenter and WebPublisher. Then it is discussed about how to develop custom applications based on VisualDB by using java API or VTL(VisualDB Template Language) and VTL tools, and how to link VisualDB sources via HTTP service interfaces for further data fusion and integration. Finally, this paper briefly describes the application and the next plan of VisualDB.

Keywords:

scientific database; data sharing; data integration; data management, data publishing