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An Interoperability Infrastructure for Developing Multidatabase Systems

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Abstract: A multidatabase system (MDBS) allows the users to simultaneously access autonomous, heterogeneous databases using a single data model and a query language. This provides for achieving interoperability among heterogeneous, federated DBMSs. In this paper, we describe the interoperability infrastructure of a multidatabase system, namely METU Interoperable DBMS (MIND). The architecture of MIND is based on OMG distributed object management model. It is implemented on top of a CORBA compliant ORB, namely, ObjectBroker. The interface of the generic database object is defined in CORBA IDL and multiple implementations of this interface, one for each component DBMSs, namely, Oracle 7, Sybase, Adabas D and MOOD (METU Object-Oriented Database System) are provided. The main components of MIND which are built on this infrastructure are a global query manager, a global transaction manager, a schema integrator, interfaces to supported database systems and a graphical user interface.

Key Words: multidatabase system, distributed object management, object management architecture, CORBA, interoperability

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