OdeView: A User-Friendly Graphical Interface to Ode

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OdeView is the graphical front end for Ode, an object-oriented database system and environment It is intended for users who do not want to write programs in Ode's database programming language O++ to interact with Ode but instead want to use a friendlier interface to Ode OdeView is based on the graphical direct manipulation paradigm that involves selection of items from pop-up menus and icons that can be clicked on and dragged OdeView provides facilities for examining the database schema examining class definitions, browsing objects, following chains of references, displaying selected portions of objects or selecting a subset of the ways in which an object can be displayed (projection), and retrieving specific objects (selection)

Upon entering OdeView, the user is presented with a scrollable "database" window containing the names and iconified images of the current Ode databases The user can select a database to interact with by using the mouse to click on the appropriate icon OdeView then opens a "class relationship" window which displays the hierarchy relationship between the object classes database The hierarchy relationship between classes is a set of dags

The user can zoom in and zoom out to examine this dag at various levels of detail The user can also examine a class in detail by clicking at the node labeled with the class of interest Clicking results in the opening of a "class information" window that has three scrollable subwindows, one showing its superclasses, the second its subclasses, and the third showing the meta data associated with this class

The class information window also has a button, clicking which shows the class definition The user may continue schema browsing by selecting another node in the schema graph, or may click on one of the superclasses or subclasses Associated with each class in Ode a the set of persistent objects of that class, called cluster The class definition window has an "objects" button that allows users to browse through the objects in the cluster Clicking this button opens the "object set" window which consists of two parts the control and object panels The control panel consists of buttons reset, next, and previous to sequence through the objects The object panel has buttons to view the object, projection (to view parts of the object), and to specify the selection criteria

An Ode object can be displayed in one or more formats depending upon the semantics of the display function associated with the corresponding class The object set window supplies one button each for each of the object display formats For example, an employee object can be displayed textually or in pictorial form, the object panel for employee will provides appropriate buttons to see these displays An object may contain embedded references to other objects The object panel of an object set window provides buttons for viewing these referenced objects The basic browsing paradigm encouraged by OdeView is to start from an object and then explore the related objects in the database by following the embedded chains of references To speed up such repetitive navigations, OdeView supports *synchronized browsing* Once the user has displayed a network of objects and the user applies a sequencing operation to any object in this network, the sequencing operation is automatically propagated over the network

OdeView is implemented using X-Windows and HP-Widgets on a SUN workstation running the UNIX system The video takes the viewers on a tour of OdeView, showing how a user interacts with OdeView to examine the database schema and the objects in the database

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