

ITASCA Distributed ODBMS

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Abstract

Itasca Systems, Inc. develops and markets the ITASCA Distributed Object Database Management System. The product is based on the MCC ORION research conducted at the Microelectronics and Computer Technology Corporation (MCC). Two aspects of the ITASCA product derived from the ORION research will be presented: dynamic schema modification and the active object database architecture.

Dynamic schema modification allows changing the definition of the database at run-time with both data present in the database system and applications executing. Schema changes can include both simple changes such as adding attributes and more complicated changes such as changing the class hierarchy at any level. The discussion will first focus on the problems addressed by dynamic schema modification. Then the semantics of schema changes will be presented.

The ITASCA active object database architecture allows the storage, management and execution of methods to occur entirely within the object database manager. This discussion will cover how the architecture is implemented and the effect that it has on the database system lifecycle.