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DETERMINING HOW CHANGES TO UNDERLYING DATA AFFECT CACHED OBJECTS

ABSTRACT

A determination can be made of how changes to underlying data affect the value of objects. A directed graph, called an *object dependence graph,* may be used to represent the data dependencies between objects. If data in a remote data source (3010) changes, database change notifications are used to "trigger" a dynamic rebuild of associated objects (3004). Thus, obsolete objects can be dynamically replaced with fresh objects. The objects can be complex objects, such as dynamic Web pages or compound-complex objects, and the data can be underlying data in a database. The update can include either: storing a new version of the object in the cache (3004); or deleting an object from the cache (3004). Caches on multiple servers can also by synchronized with the data in a single common database.

Fig. 30a

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