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# United States Patent [19]

**Draper et al.**

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[54] **TRANSACTION CLASH MANAGEMENT IN A DISCONNECTABLE COMPUTER AND NETWORK**

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[52] **U.S. Cl.** ..... **707/202**; 201/203; 201/204

[58] **Field of Search** ..... 707/1–206; 395/180–185.1, 395/701, 710; 370/268–349

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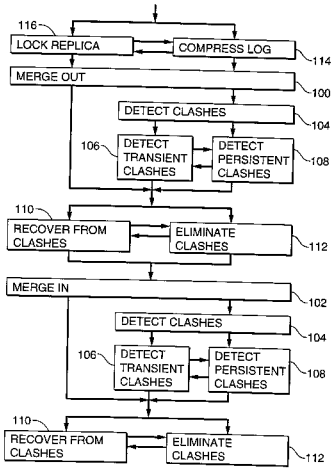
[57] **ABSTRACT**

A method and apparatus are disclosed for detecting and handling clashes that may occur when transactions performed on disconnected replicas of a database are merged after the computers carrying the replicas are reconnected. A variety of clashes are addressed, including those which arise from inconsistent add, remove, move, and modify operations. Transient clashes that would resolve themselves without significant intervention are distinguished from persistent clashes. Log patching, regression, key modification, duplication, and a variety of other tools for handling the clashes are described.

**51 Claims, 4 Drawing Sheets**