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**Hwang et al.**

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(54) **SYSTEM AND METHOD FOR REMOTE MIRROR DATA BACKUP OVER A NETWORK**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 261 days.

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(Continued)

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(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

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Disclosed is a method and a system for remote mirror data backup over a network. The system comprises a local domain site and at least one remote domain site, wherein each site has one domain mirror agent and one storage server system thereon. Each storage server system includes one or more storage servers, and one of the domain mirror agents is pre-defined as the master mirror agent. With such a remote mirror system, the method performs the operations of virtual mirror device allocation, mirror operation, data consistency check, third mirror allocation, and recovery of local storage device. The present invention expands the conventional logical volume management (LVM) to a network environment, effectively improving the backup/recovery capability of remote mirroring.

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**G06F 15/16** (2006.01)

(52) **U.S. Cl.** ..... **711/162**; 711/170; 709/203; 709/208; 709/218; 709/219

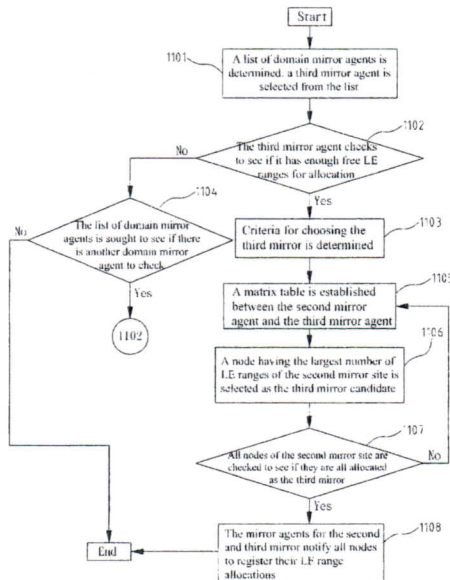
(58) **Field of Classification Search** ..... 711/141, 711/161, 162, 170, 171, 172, 173  
See application file for complete search history.

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**20 Claims, 17 Drawing Sheets**



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