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Sicola et al.

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(54) **SYSTEM FOR DATA REPLICATION USING REDUNDANT PAIRS OF STORAGE CONTROLLERS, FIBRE CHANNEL FABRICS AND LINKS THEREBETWEEN**

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(52) U.S. Cl. **714/6**; 711/162
(58) Field of Search 714/6, 9; 711/162, 711/161

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(57) **ABSTRACT**

A data replication system having a redundant configuration including dual Fibre Channel fabric links interconnecting each of the components of two data storage sites, wherein each site comprises a host computer and associated data storage array, with redundant array controllers and adapters. Each array controller in the system is capable of performing all of the data replication functions, and each host 'sees' remote data as if it were local. Each array controller has a dedicated link via a fabric to a partner on the remote side of the long-distance link between fabric elements. Each dedicated link does not appear to any host as an available link to them for data access; however, it is visible to the partner array controllers involved in data replication operations. These links are managed by each partner array controller as if being 'clustered' with a reliable data link between them.

16 Claims, 11 Drawing Sheets
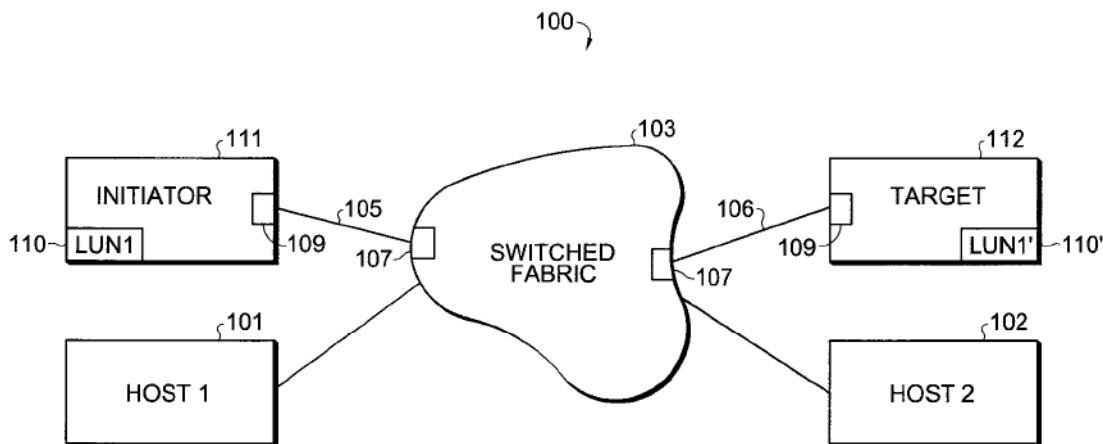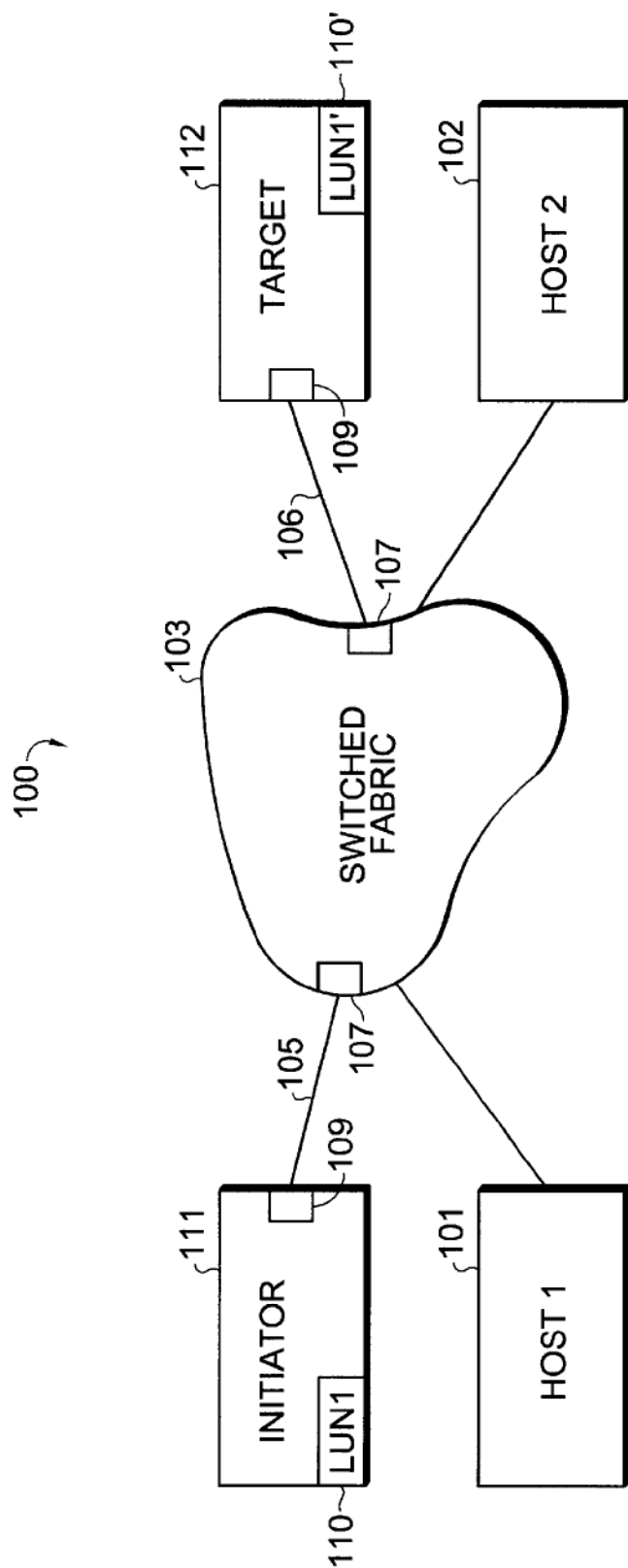
Fig. 1

Fig. 2

Fig. 3

Fig. 4

DOCKET ALARM
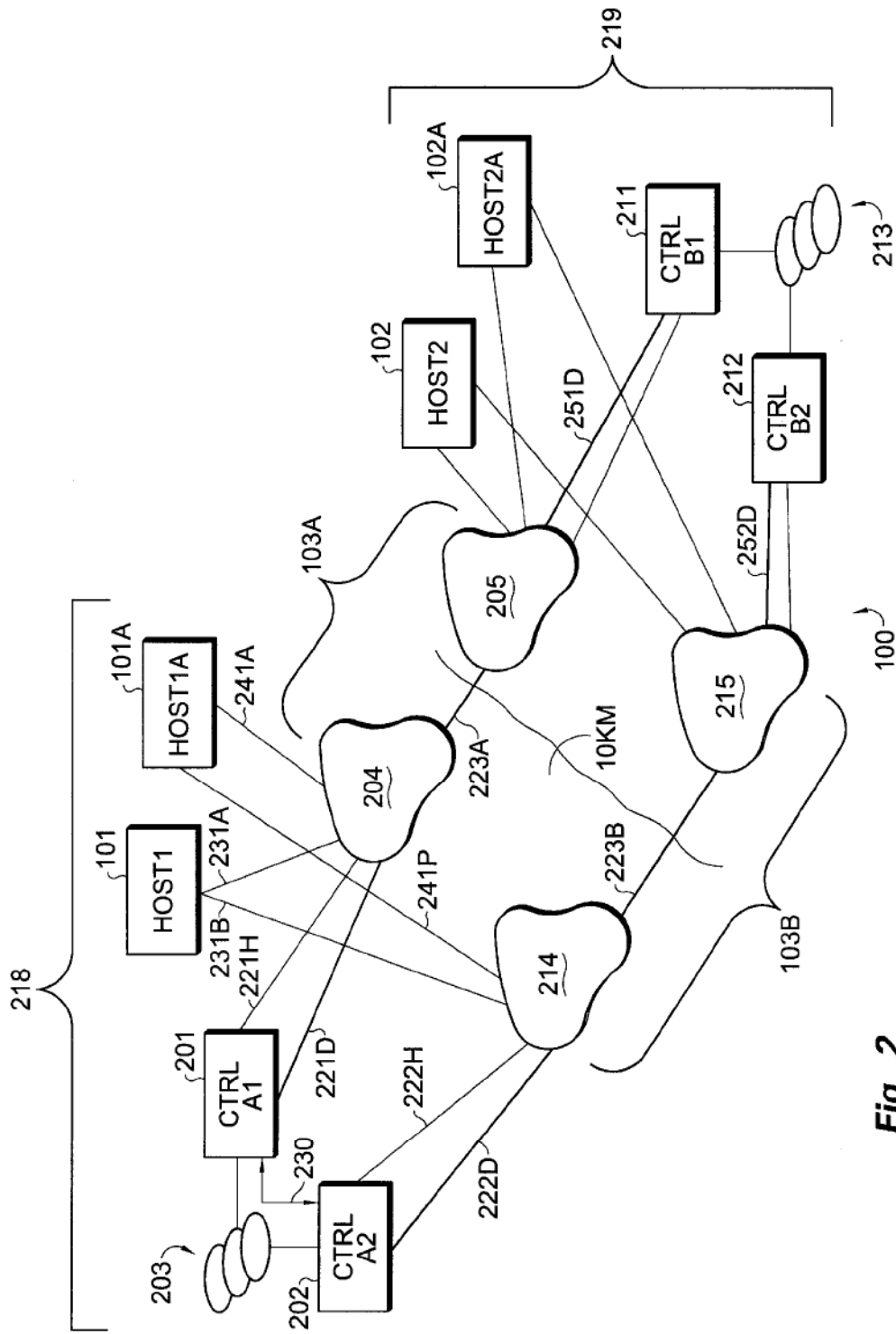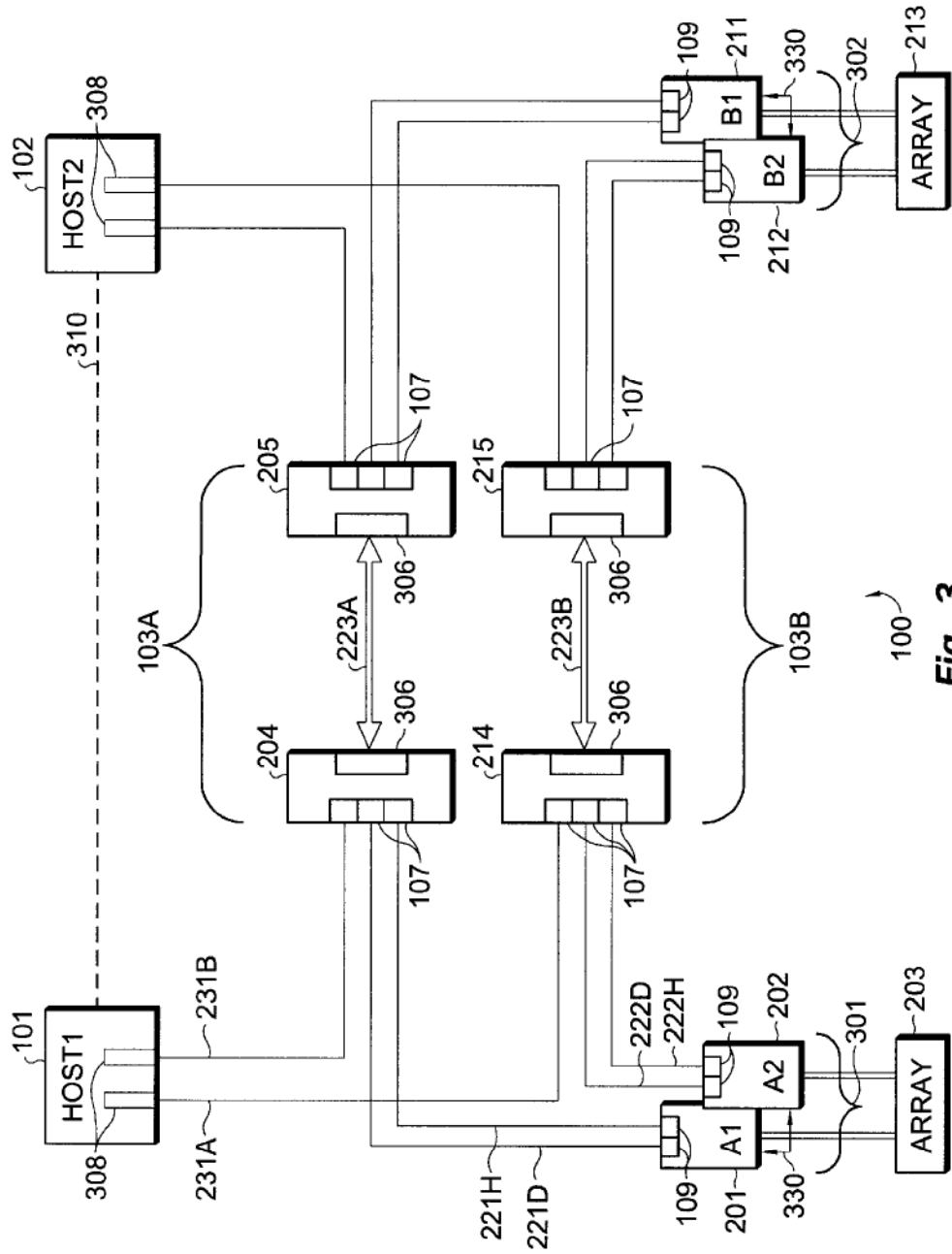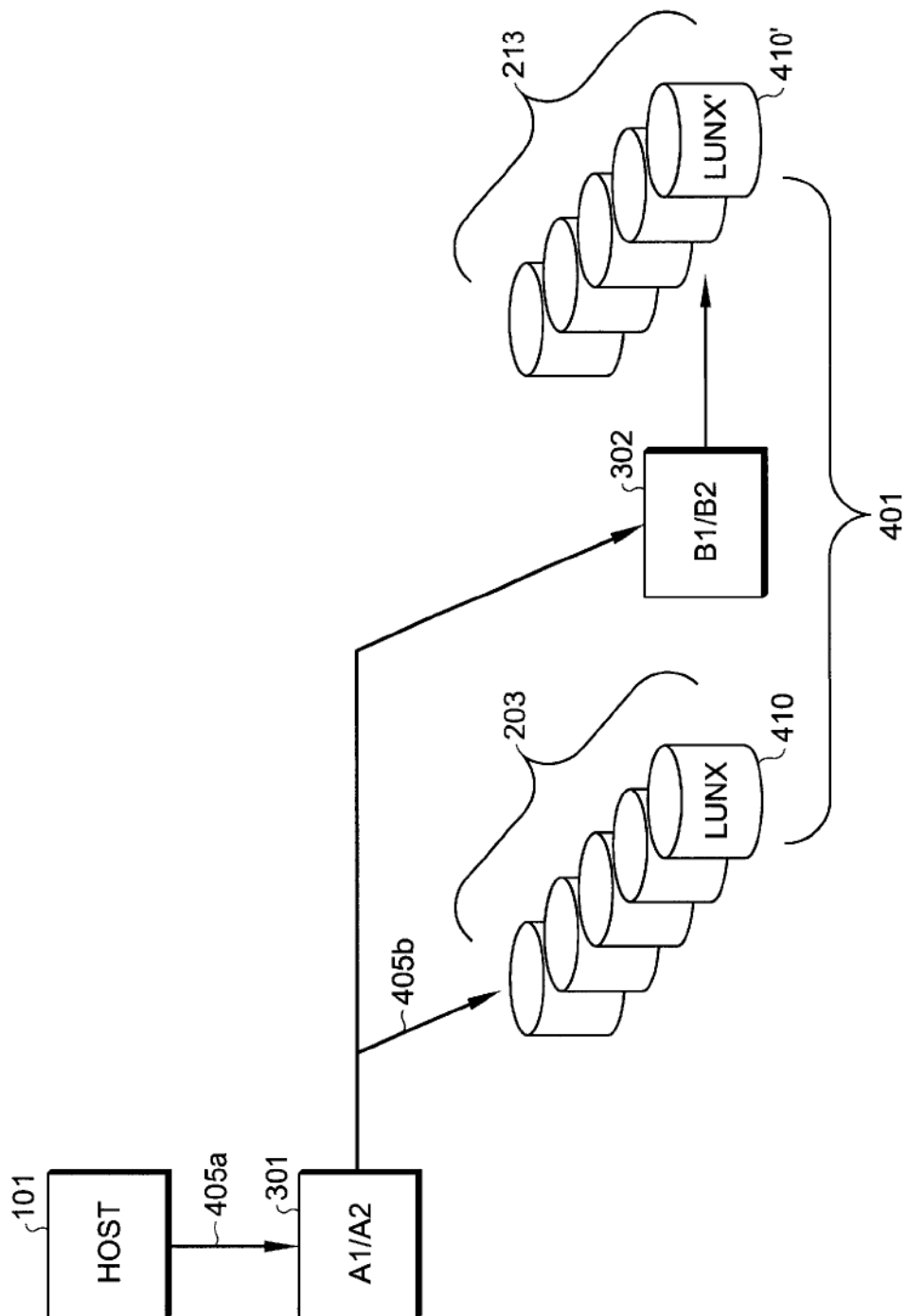
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