

(12) **United States Patent**
Baek et al.

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 (45) **Date of Patent:** **Dec. 20, 2005**

(54) **APPARATUS FOR REDUNDANT INTERCONNECTION BETWEEN MULTIPLE HOSTS AND RAID**

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(75) Inventors: **Sung-Hoon Baek**, Taejon (KR);
Joong-Bae Kim, Taejon (KR);
Yong-Youn Kim, Taejon (KR)

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(73) Assignee: **Electronics and Telecommunications Research Institute, (KR)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 856 days.

* cited by examiner

(21) Appl. No.: **09/753,245**

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(65) **Prior Publication Data**

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(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

Sep. 19, 2000 (KR) 2000-54807

The apparatus for a redundant interconnection between multiple hosts and a redundant array of inexpensive disks (hereinafter, referred to as 'RAID'), which is capable of supporting a fault tolerance of RAID controllers and simultaneously heightening a performance, comprises a plurality of RAID controlling units for processing a requirement of numerous host computers connected with one another through the industrial standard communication network and for fault tolerance; a plurality of connecting units for connecting the plurality of RAID controlling units to the numerous host computers; and a plural number of network interface controlling units respectively contained into the plurality of RAID controlling units, for exchanging information directly with an opposite network interface controlling unit provided within an opposite RAID controlling unit and the numerous host computers, through the plurality of connecting units.

(51) **Int. Cl.** **G06F 13/00; G06F 12/00**

(52) **U.S. Cl.** **711/114; 709/250**

(58) **Field of Search** **709/201-203, 709/217-219, 223-224, 239-240, 244, 250; 711/114; 710/38; 370/360, 412**

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9 Claims, 6 Drawing Sheets

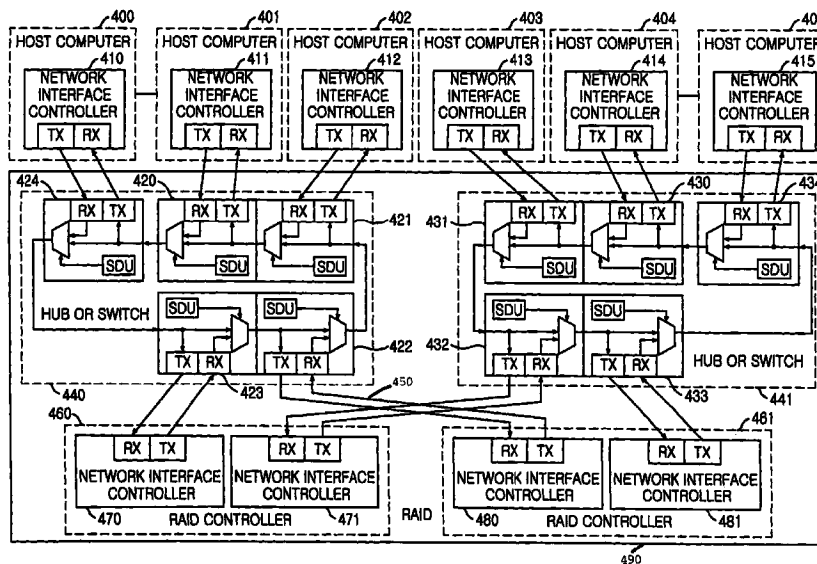


FIG. 1

--PRIOR ART--

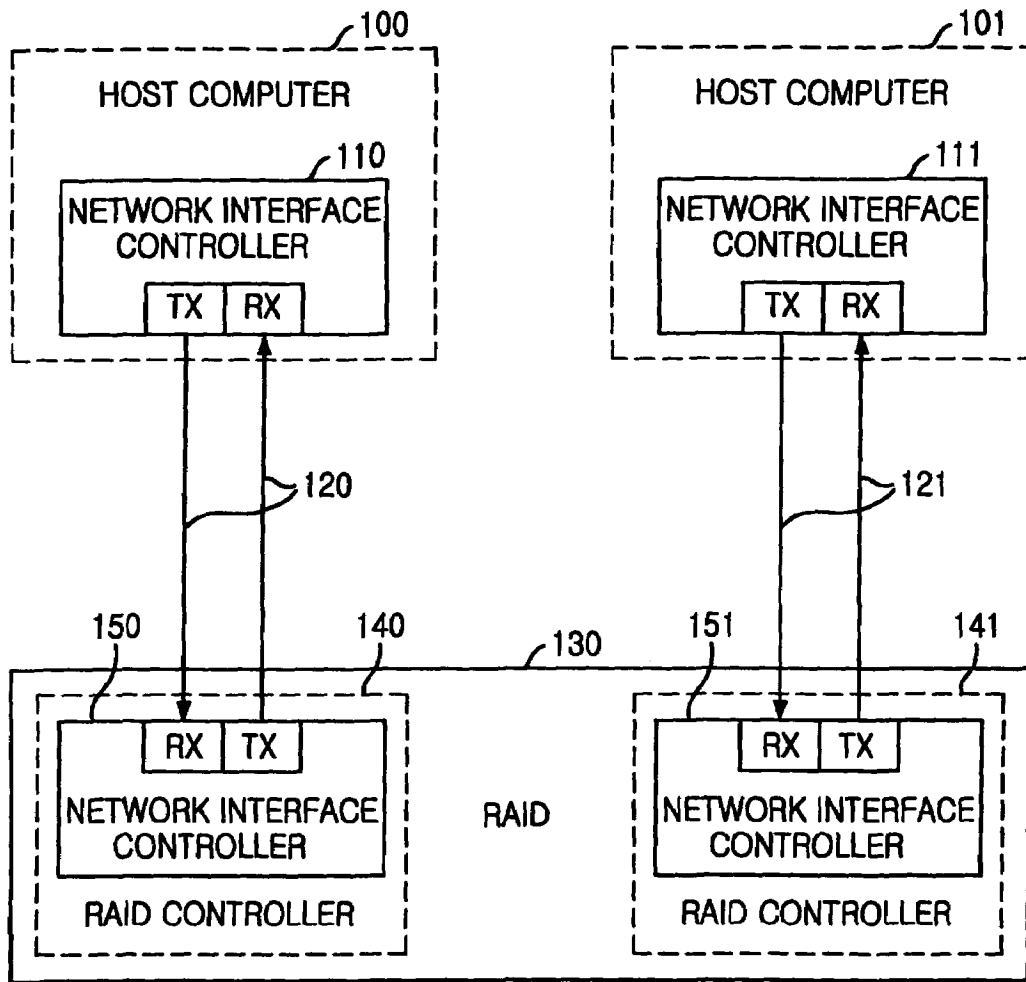


FIG. 2

--PRIOR ART--

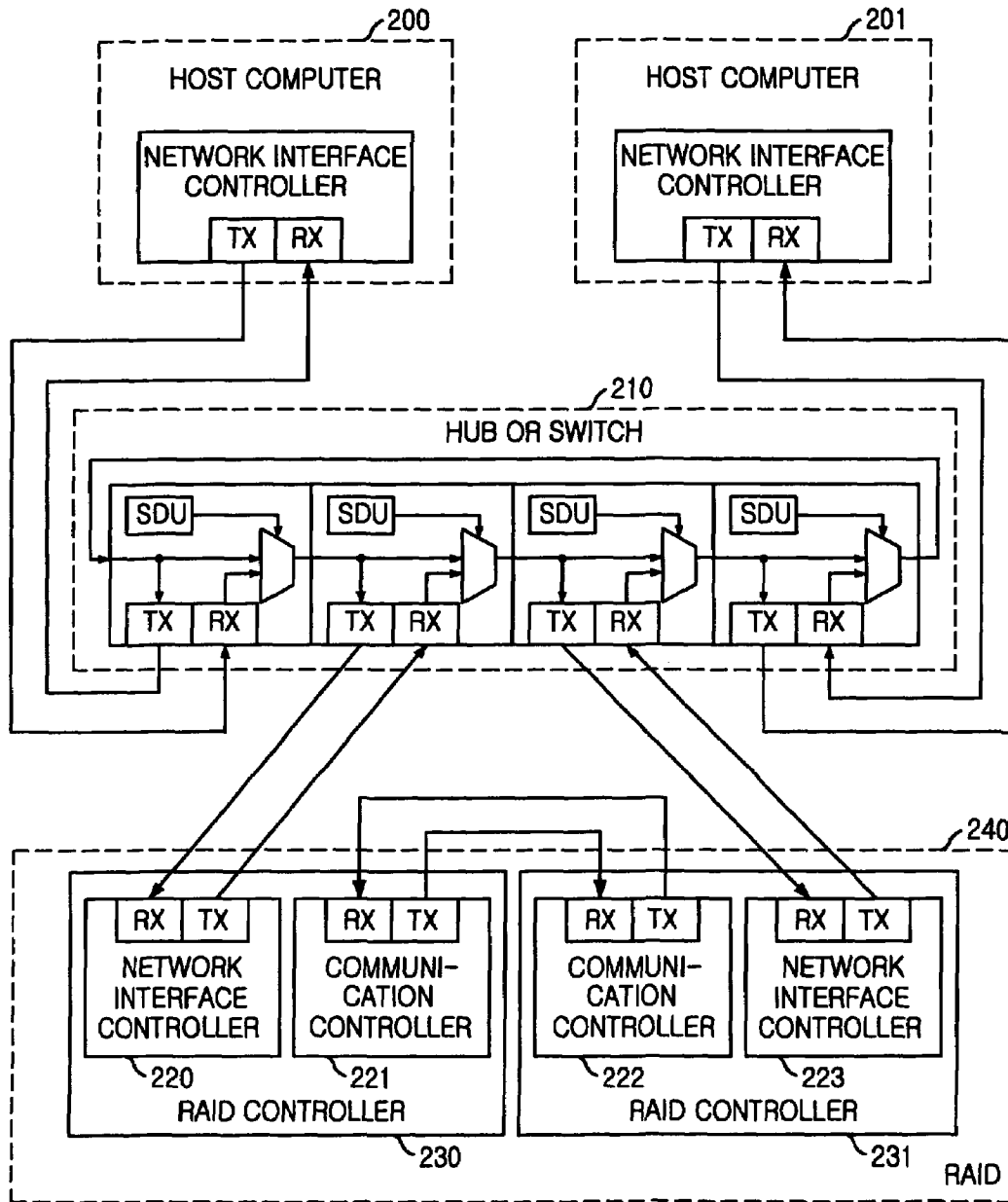


FIG. 3

--PRIOR ART--

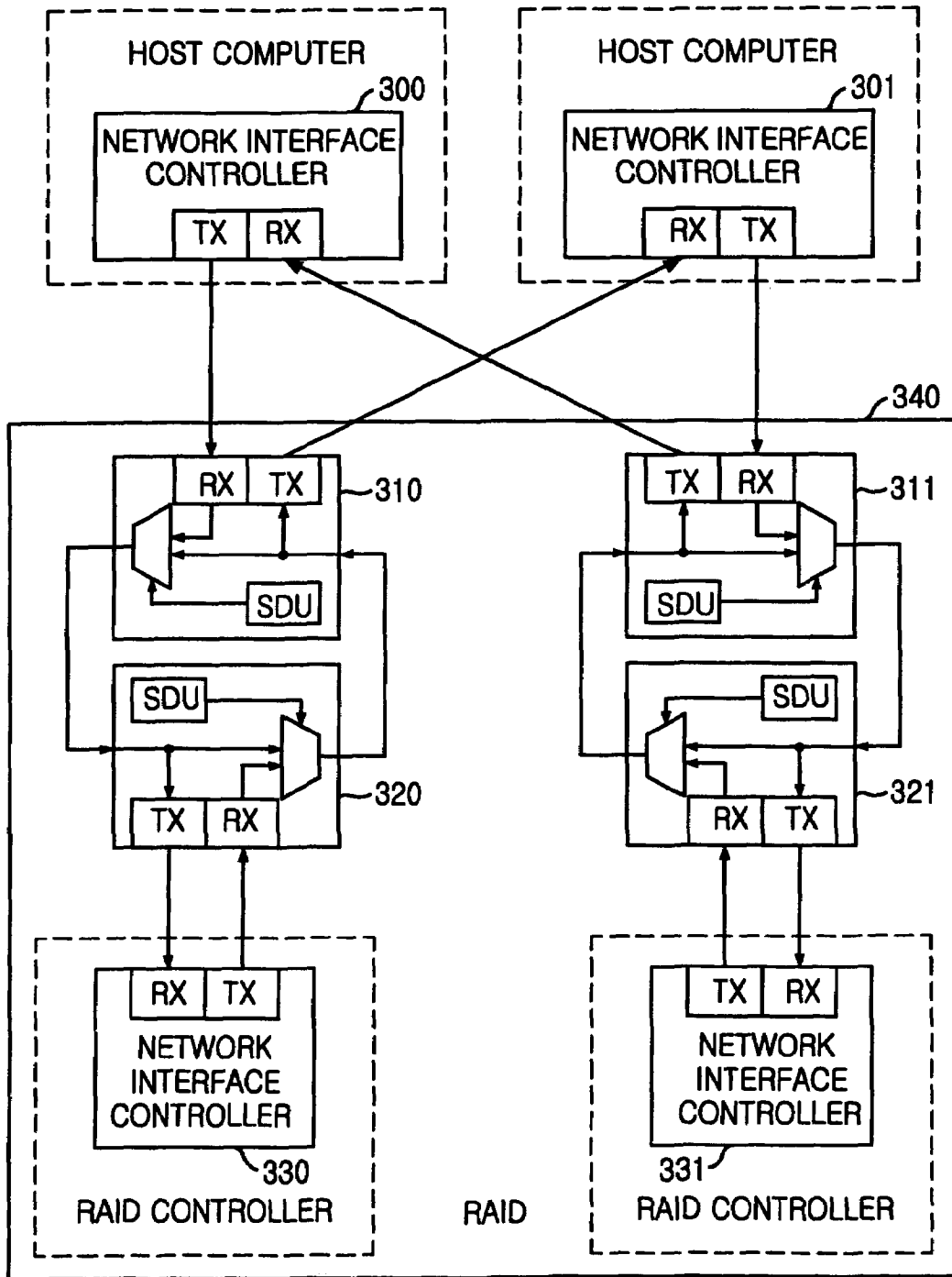
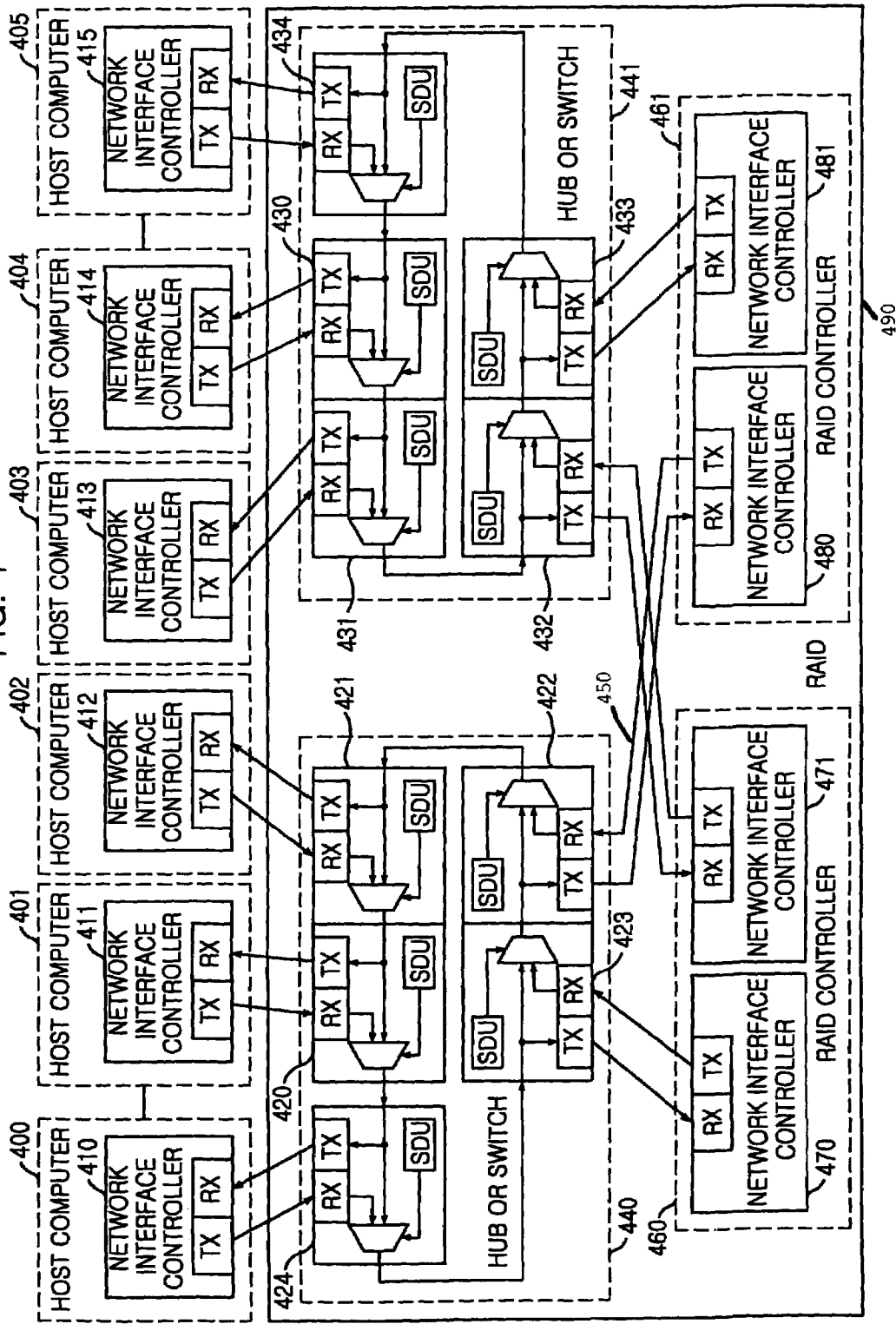


FIG. 4



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