

[54] **NETWORK PROCESSOR FOR TRANSFORMING A MESSAGE TRANSPORTED FROM AN I/O CHANNEL TO A NETWORK BY ADDING A MESSAGE IDENTIFIER AND THEN CONVERTING THE MESSAGE**

4,768,150	8/1988	Chang et al. ....	364/300
4,855,905	8/1989	Estrada et al. ....	364/200
4,941,089	7/1990	Fischer .....	364/200
5,124,909	6/1992	Blakely .....	395/200
5,142,622	8/1992	Owens .....	395/200
5,251,205	10/1993	Callon et al. ....	370/60
5,287,537	2/1994	Newmark et al. ....	395/800
5,307,346	4/1994	Fieldhouse .....	370/85.1
5,309,437	5/1994	Perlman et al. ....	370/85.13
5,327,558	7/1994	Burke et al. ....	395/650
5,490,252	2/1996	Macera et al. ....	395/200.01

[75] Inventors: **Maurice J. Bach**, Haifa, Israel; **Robert B. Hoppes**, Hyde Park, N.Y.; **Clifford B. Meltzer**, Ossining, N.Y.; **Kenneth J. Parchinski**, Wappingers Falls, N.Y.; **Gary J. Whelan**, Rhinebeck, N.Y.

[73] Assignee: **International Business Machines Corporation**, Armonk, N.Y.

*Primary Examiner*—Thomas C. Lee  
*Assistant Examiner*—Duo Chen  
*Attorney, Agent, or Firm*—Gerald R. Woods

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**Related U.S. Application Data**

[63] Continuation of Ser. No. 966,821, Dec. 31, 1992, abandoned.

[51] **Int. Cl.<sup>6</sup>** ..... **G06F 13/00**

[52] **U.S. Cl.** ..... **395/200.01**; 395/200.14;  
 395/285; 370/466; 370/469

[58] **Field of Search** ..... 395/650, 500,  
 395/200.01, 200.14, 285, 800; 370/85.1,  
 85.13, 60

[56] **References Cited**

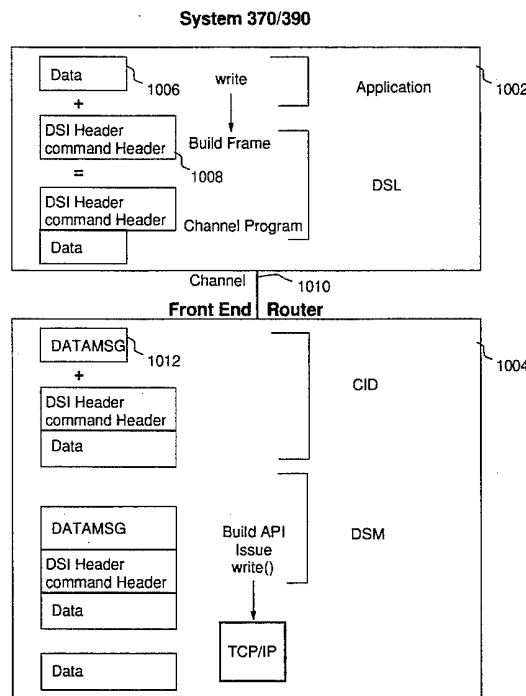
**U.S. PATENT DOCUMENTS**

4,428,043 1/1984 Catiller et al. .... 364/200

[57] **ABSTRACT**

A system and method for distributing application-to-application network communications protocol processing. Host computers implement distributed API processing across a high speed I/O channel increasing throughput. The application API conforms to standard protocols but protocol processing is distributed using a cross-channel distributed sockets API at the session layer. This API allows multiplexing of data from one or more hosts to one or more front end routers managing network communications. Multiplexing increases network performance through parallel processing and advantageously employs host high speed I/O functions. Front end routers perform lower level protocol tasks necessary to exchange data over the communications network.

**7 Claims, 16 Drawing Sheets**



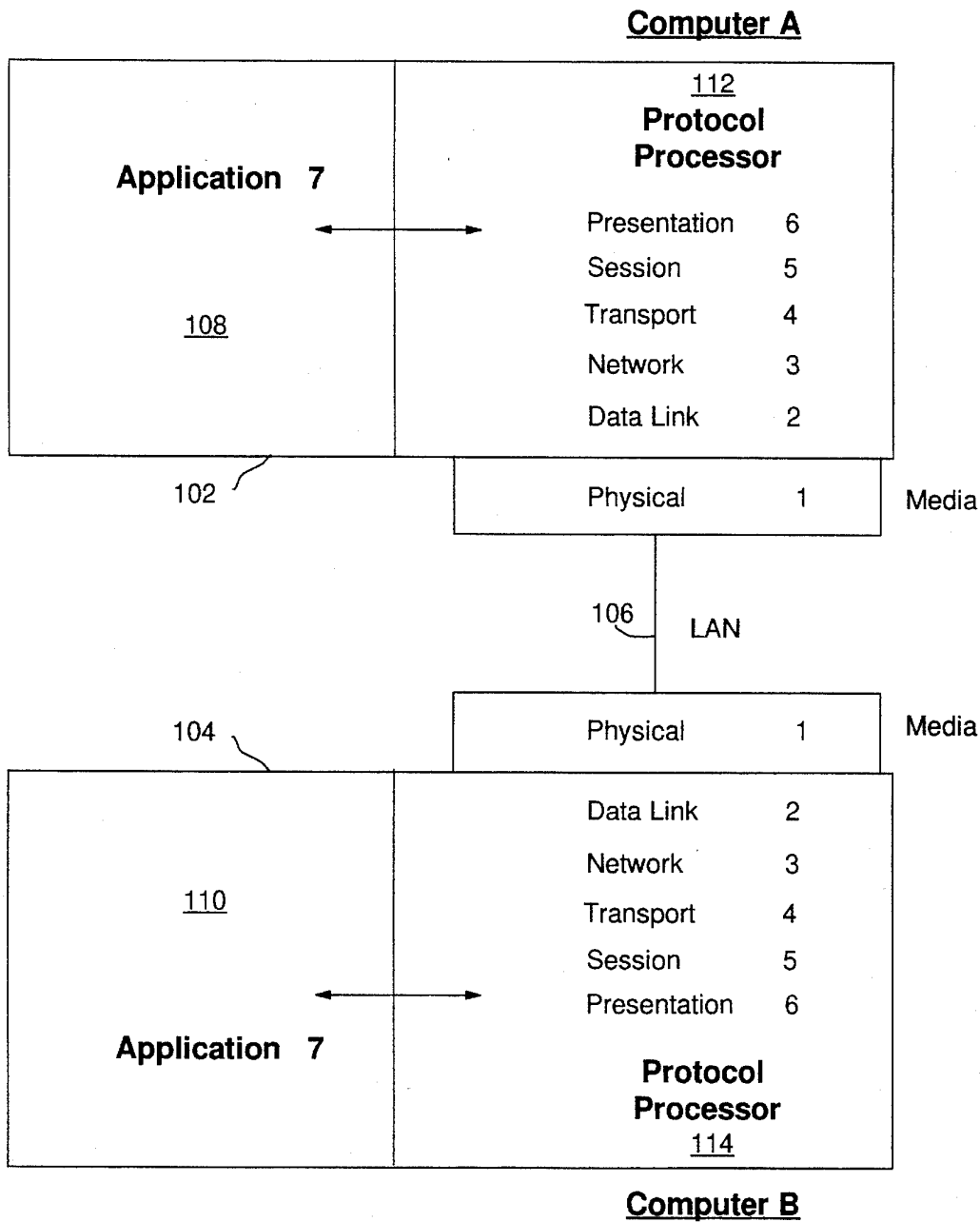


FIG. 1

System 370/390

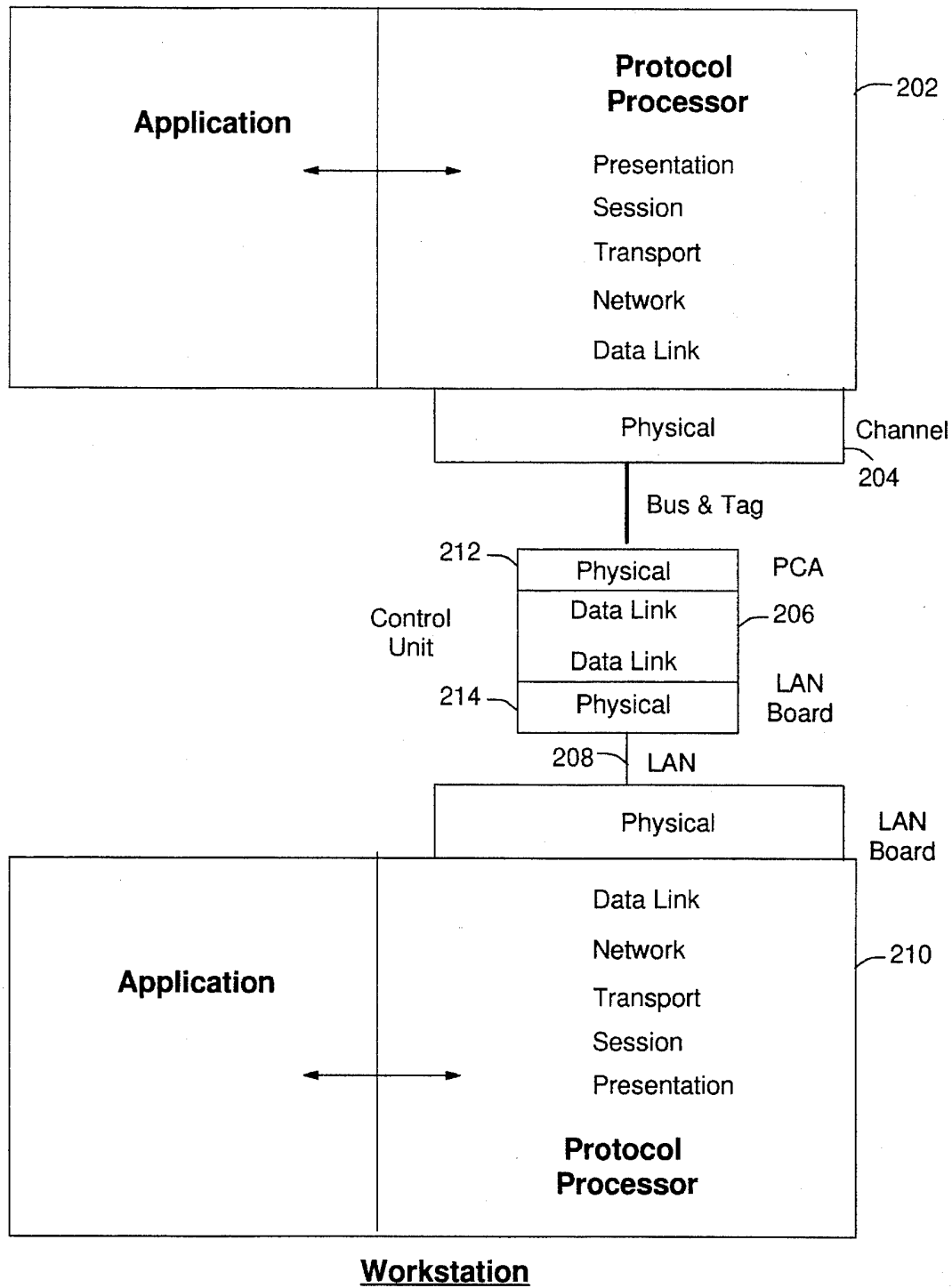


FIG. 2 Prior Art

**System 370/390**

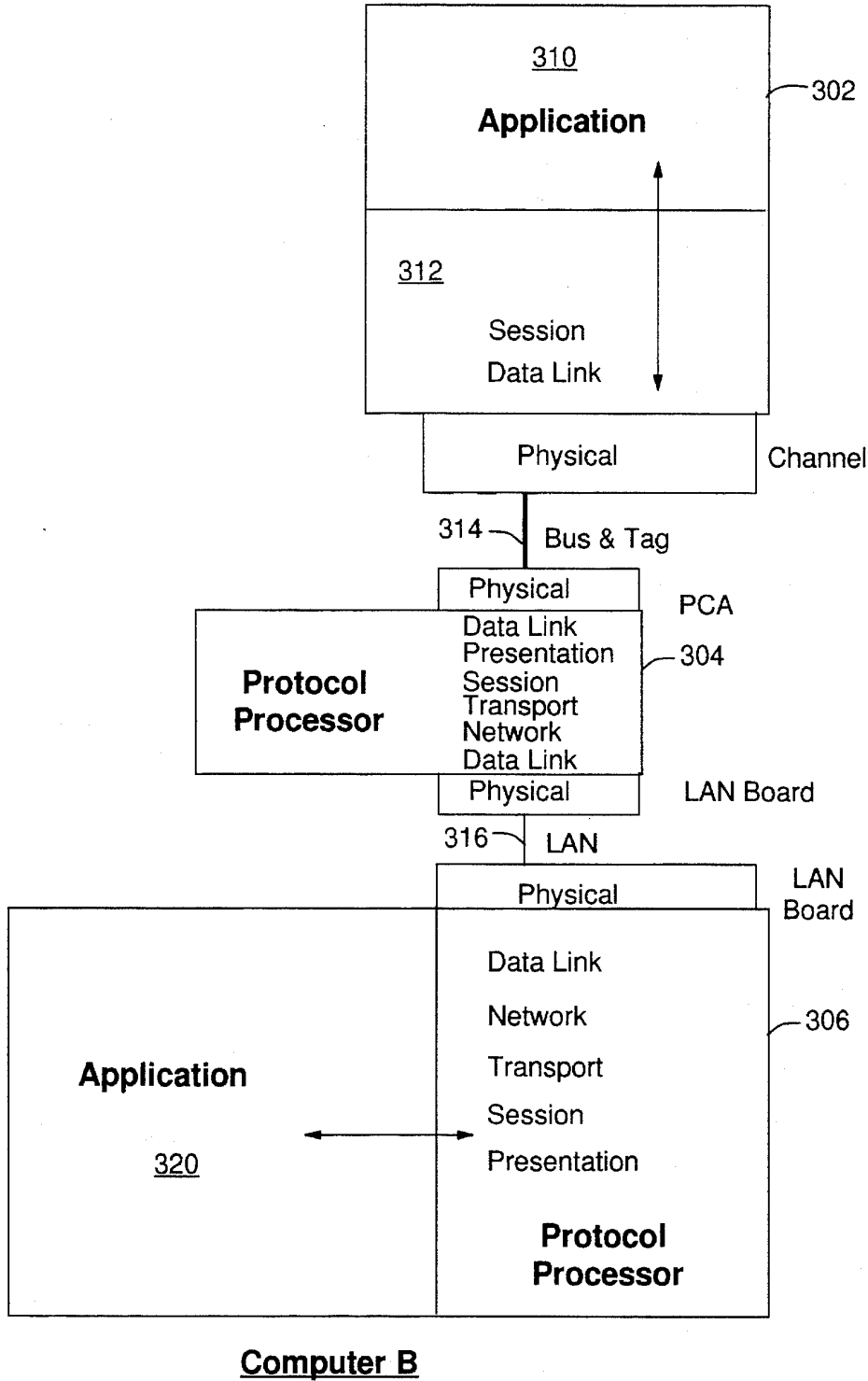


FIG. 3

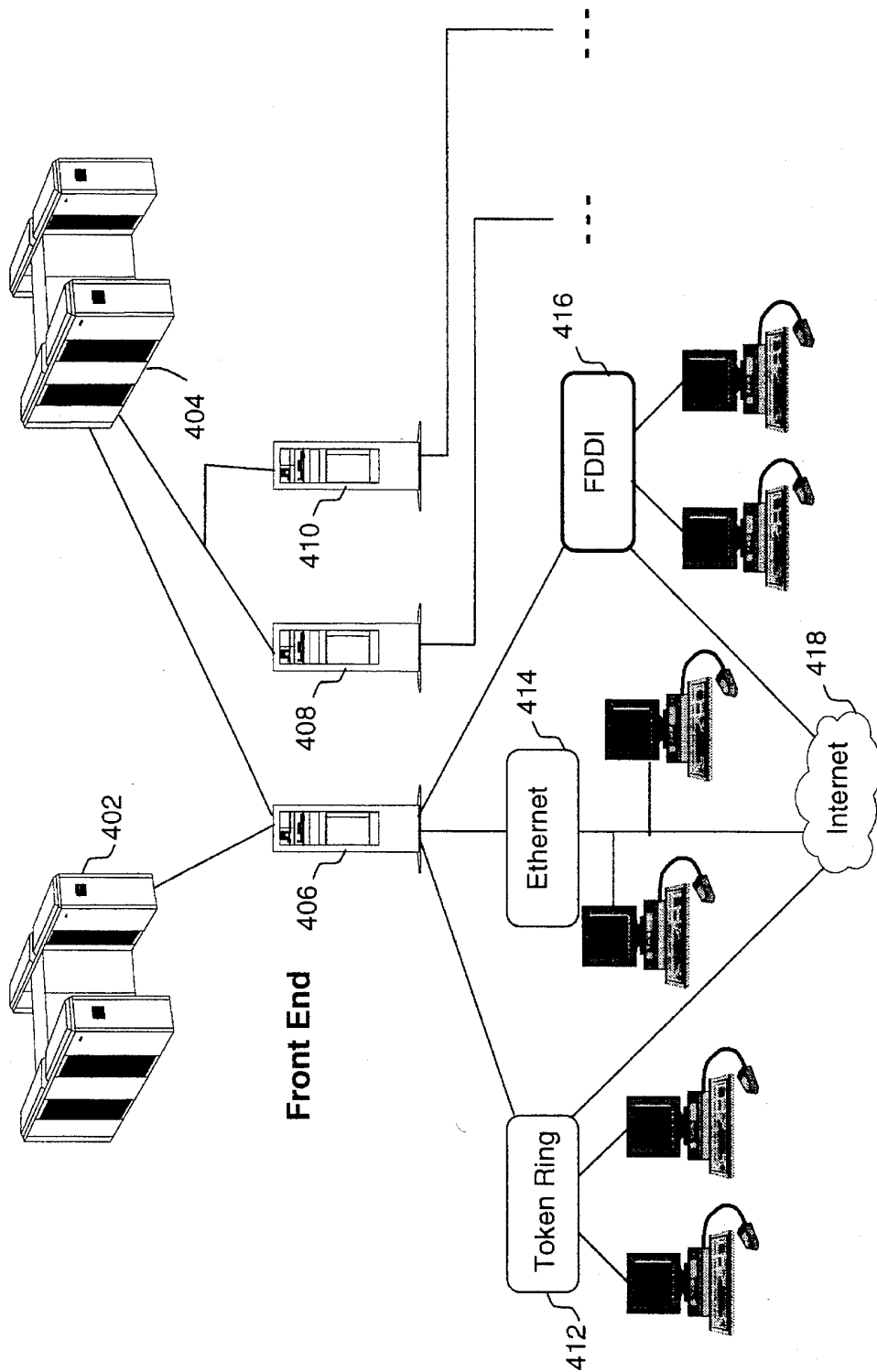


FIG. 4

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