



US005619650A

United States Patent [19]

Bach et al.

[11] Patent Number: **5,619,650**

[45] Date of Patent: **Apr. 8, 1997**

[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

[21] Appl. No.: **531,579**

[22] Filed: **Sep. 21, 1995**

[57] ABSTRACT

Related U.S. Application Data

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

[51] Int. Cl.⁶ **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**

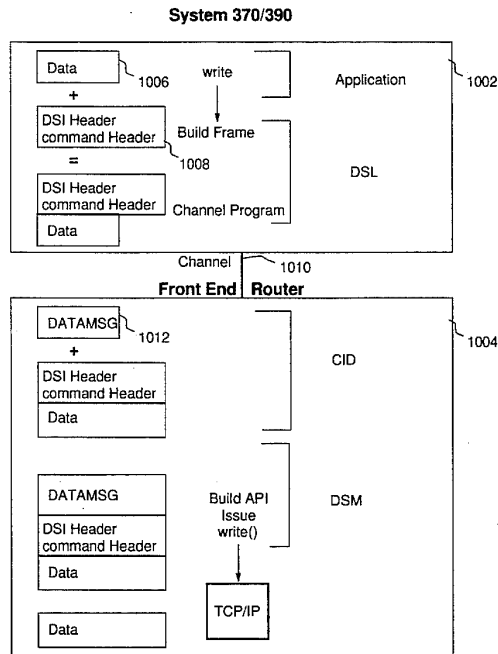
A system and method for distributing application-to-application network communications protocol processing. Host computers implement distributed API processing across a high speed I/O channel increasing throughput. The application API conforms to standard protocols but protocol processing is distributed 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.

[56] References Cited

U.S. PATENT DOCUMENTS

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

7 Claims, 16 Drawing Sheets



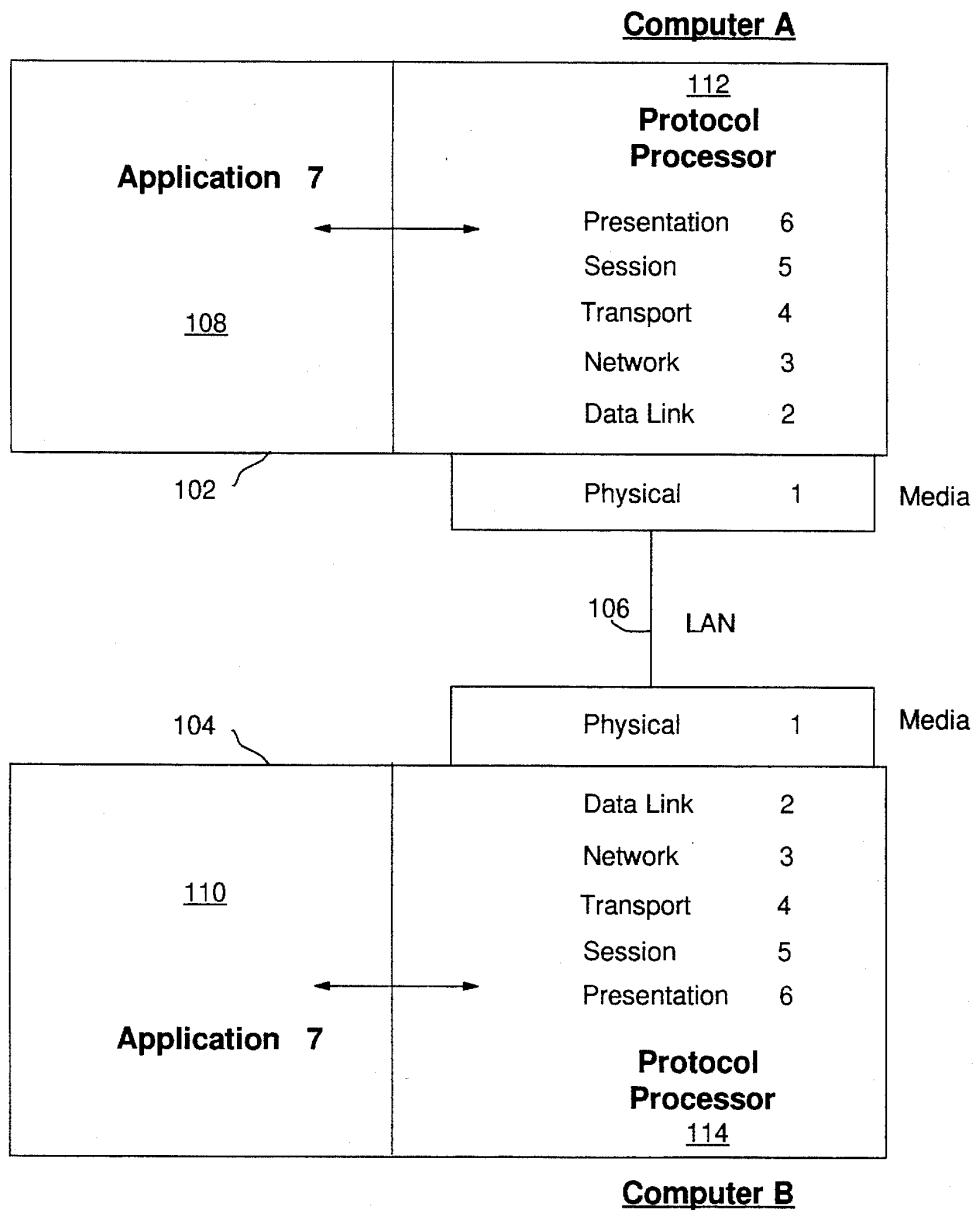


FIG. 1

System 370/390

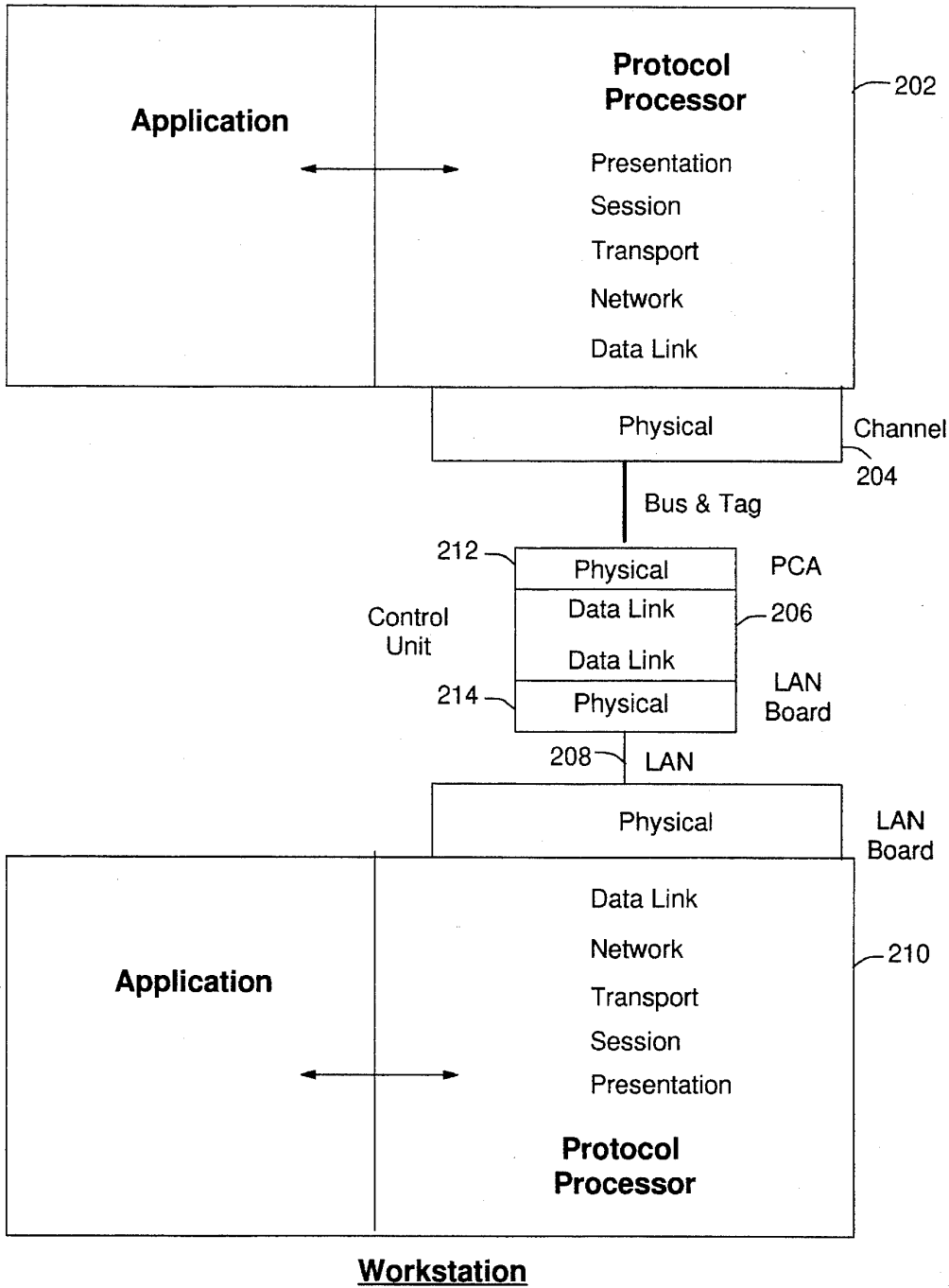


FIG. 2 Prior Art

System 370/390

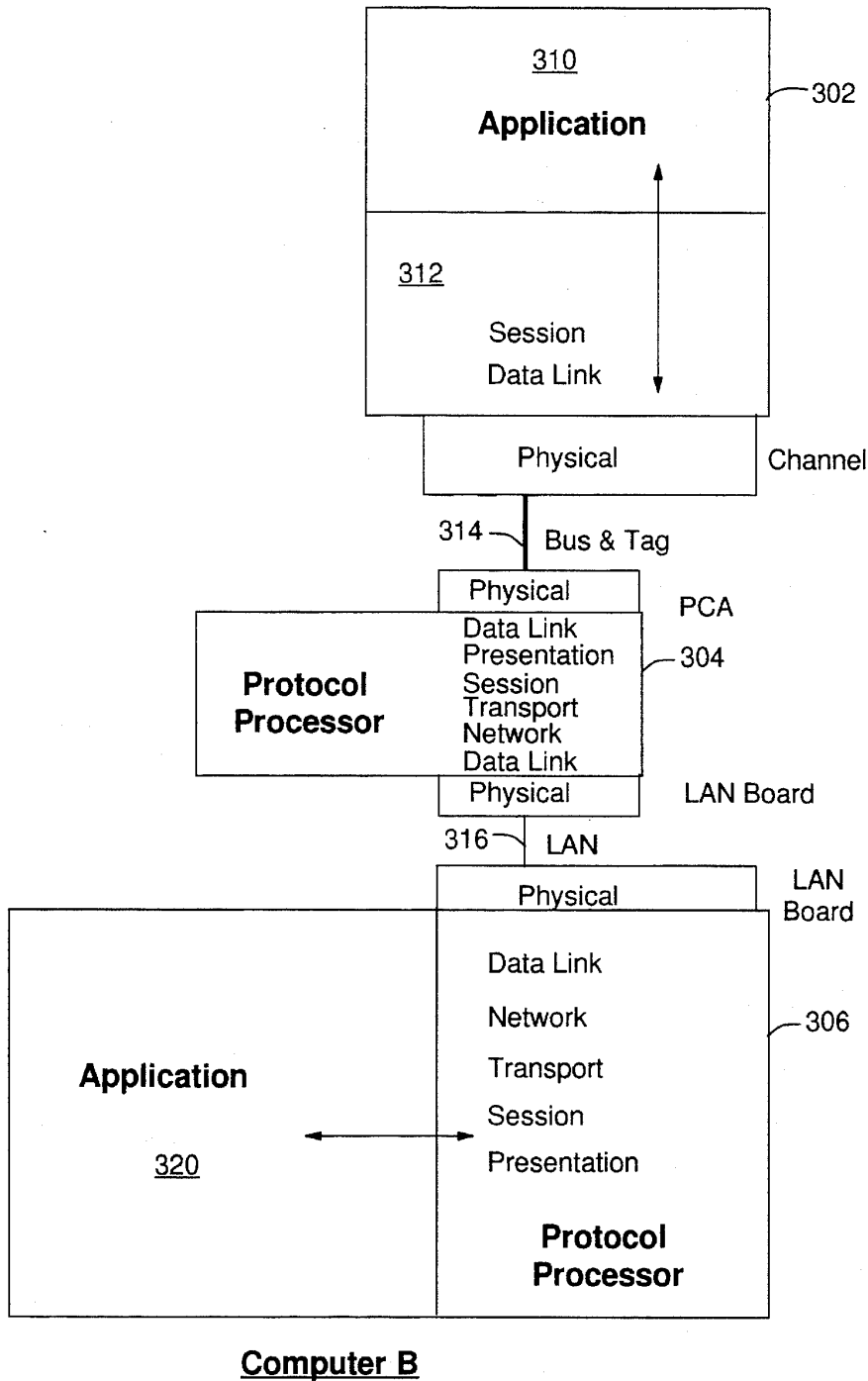


FIG. 3

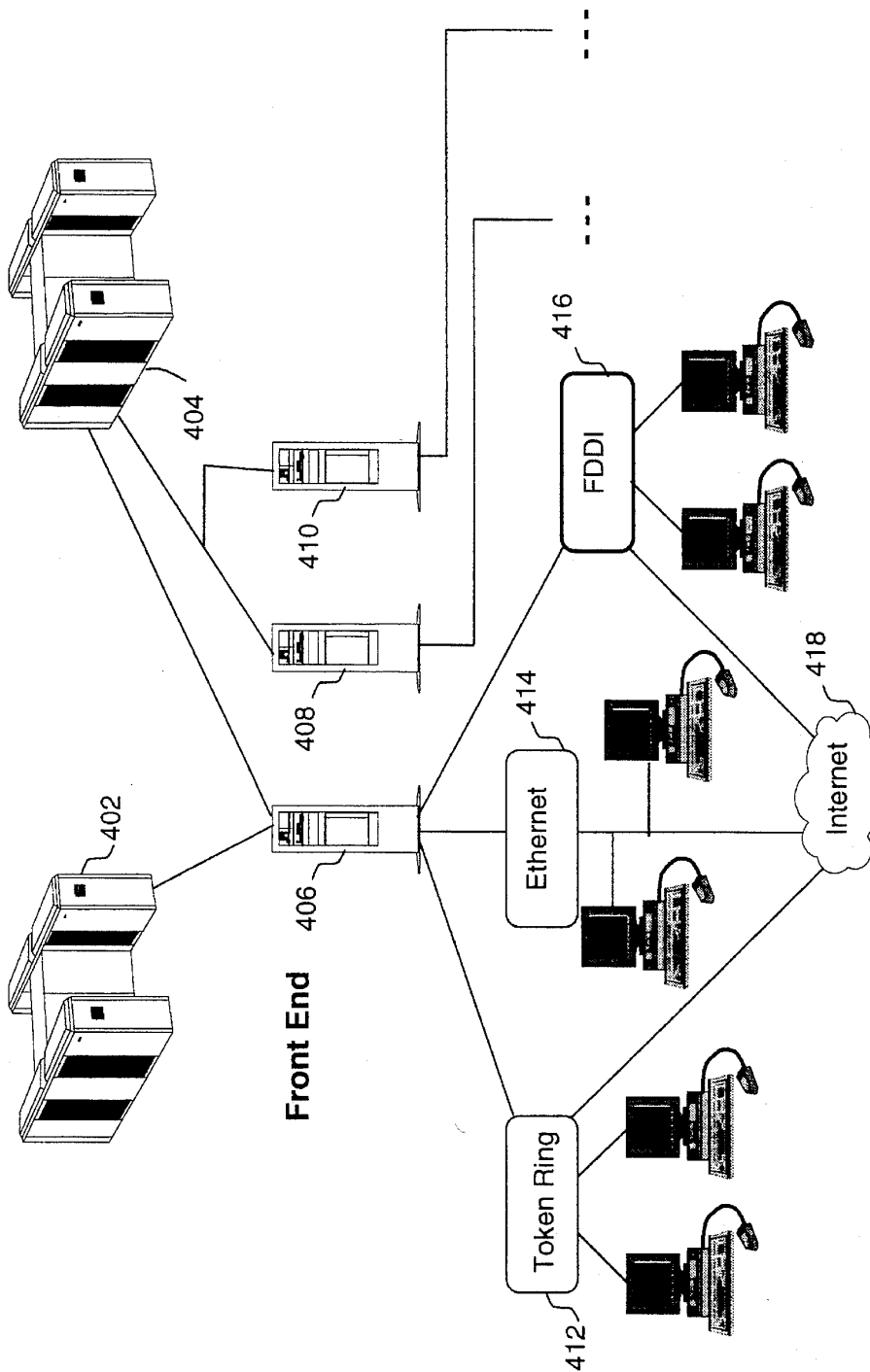


FIG. 4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.