



US006839751B1

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

(10) **Patent No.:** **US 6,839,751 B1**  
(45) **Date of Patent:** **Jan. 4, 2005**

(54) **RE-USING INFORMATION FROM DATA TRANSACTIONS FOR MAINTAINING STATISTICS IN NETWORK MONITORING**

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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 728 days.

(21) Appl. No.: **09/608,126**

(22) Filed: **Jun. 30, 2000**

**Related U.S. Application Data**

(60) Provisional application No. 60/141,903, filed on Jun. 30, 1999.

(51) **Int. Cl.**<sup>7</sup> ..... **G06F 15/173**

(52) **U.S. Cl.** ..... **709/224; 709/223; 709/230**

(58) **Field of Search** ..... **709/223, 224, 709/231, 232, 230; 370/252, 231; 379/32; 704/43; 714/39; 340/825**

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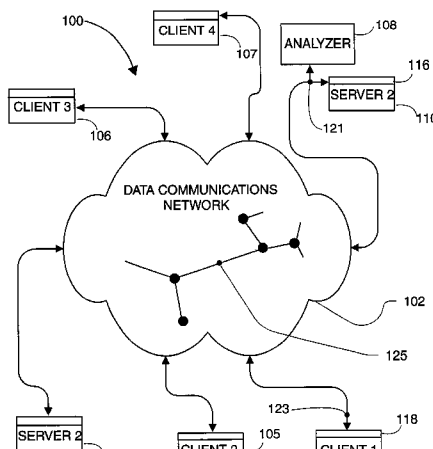
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(57) **ABSTRACT**

A method of and monitor apparatus for analyzing a flow of packets passing through a connection point on a computer network. The method includes receiving a packet from a packet acquisition device, and looking up a flow-entry database containing flow-entries for previously encountered conversational flows. The looking up to determine if the received packet is of an existing flow. Each and every packet is processed. If the packet is of an existing flow, the method updates the flow-entry of the existing flow, including storing one or more statistical measures kept in the flow-entry. If the packet is of a new flow, the method stores a new flow-entry for the new flow in the flow-entry database, including storing one or more statistical measures kept in the flow-entry. The statistical measures are used to determine metrics related to the flow. The metrics may be base metrics from which quality of service metrics are determined, or may be the quality of service metrics.

**21 Claims, 18 Drawing Sheets**



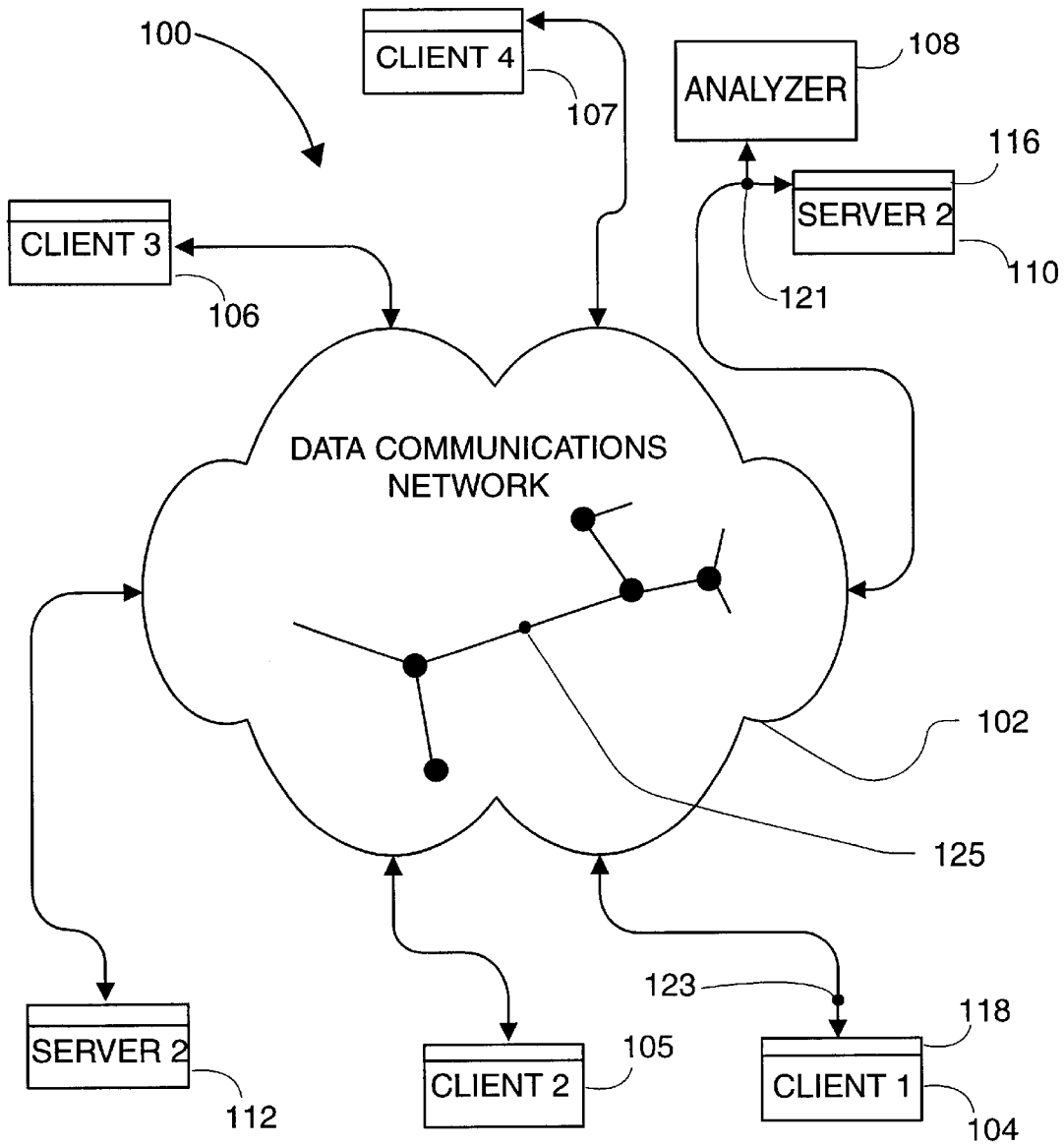


FIG. 1



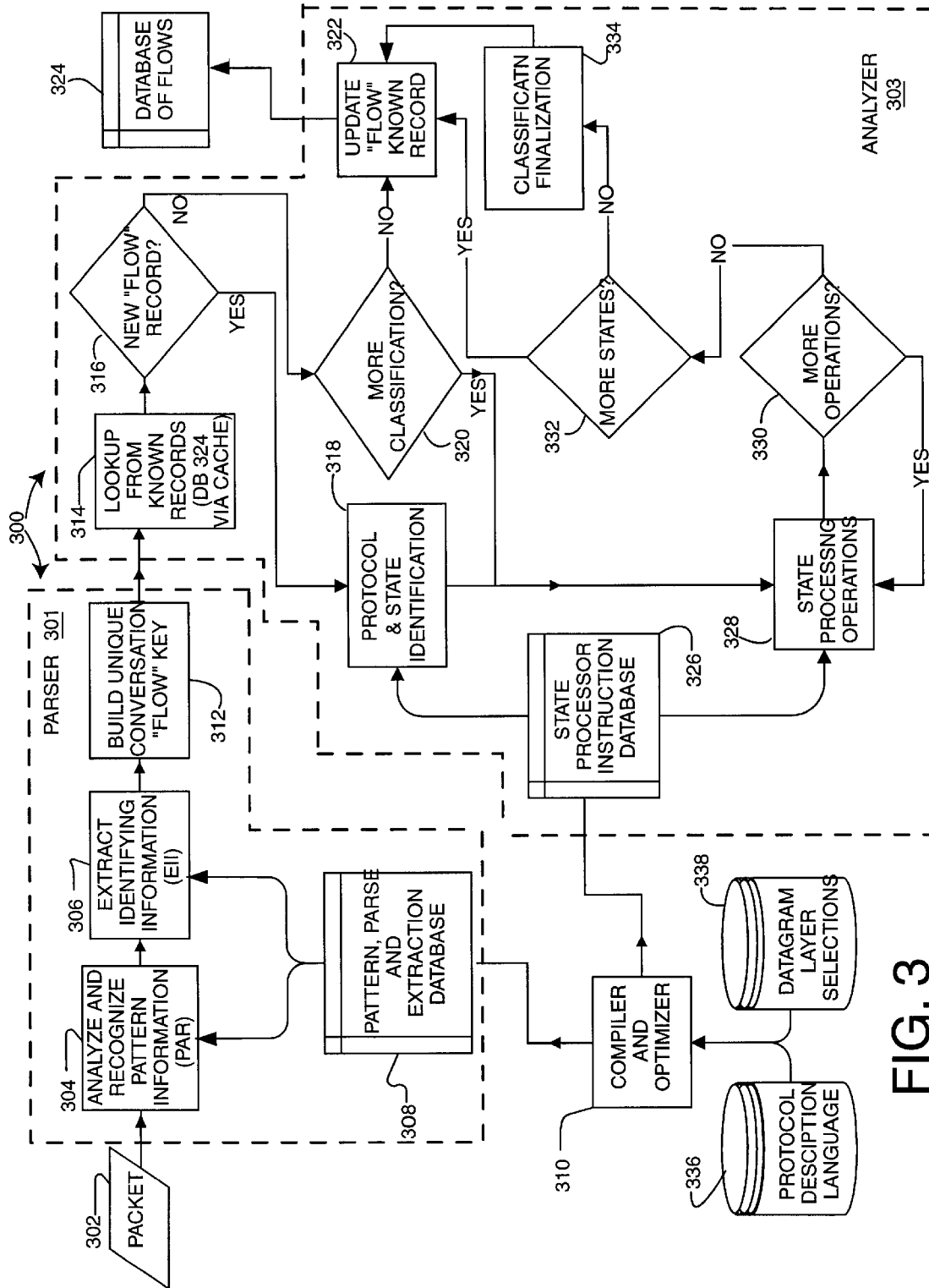


FIG. 3

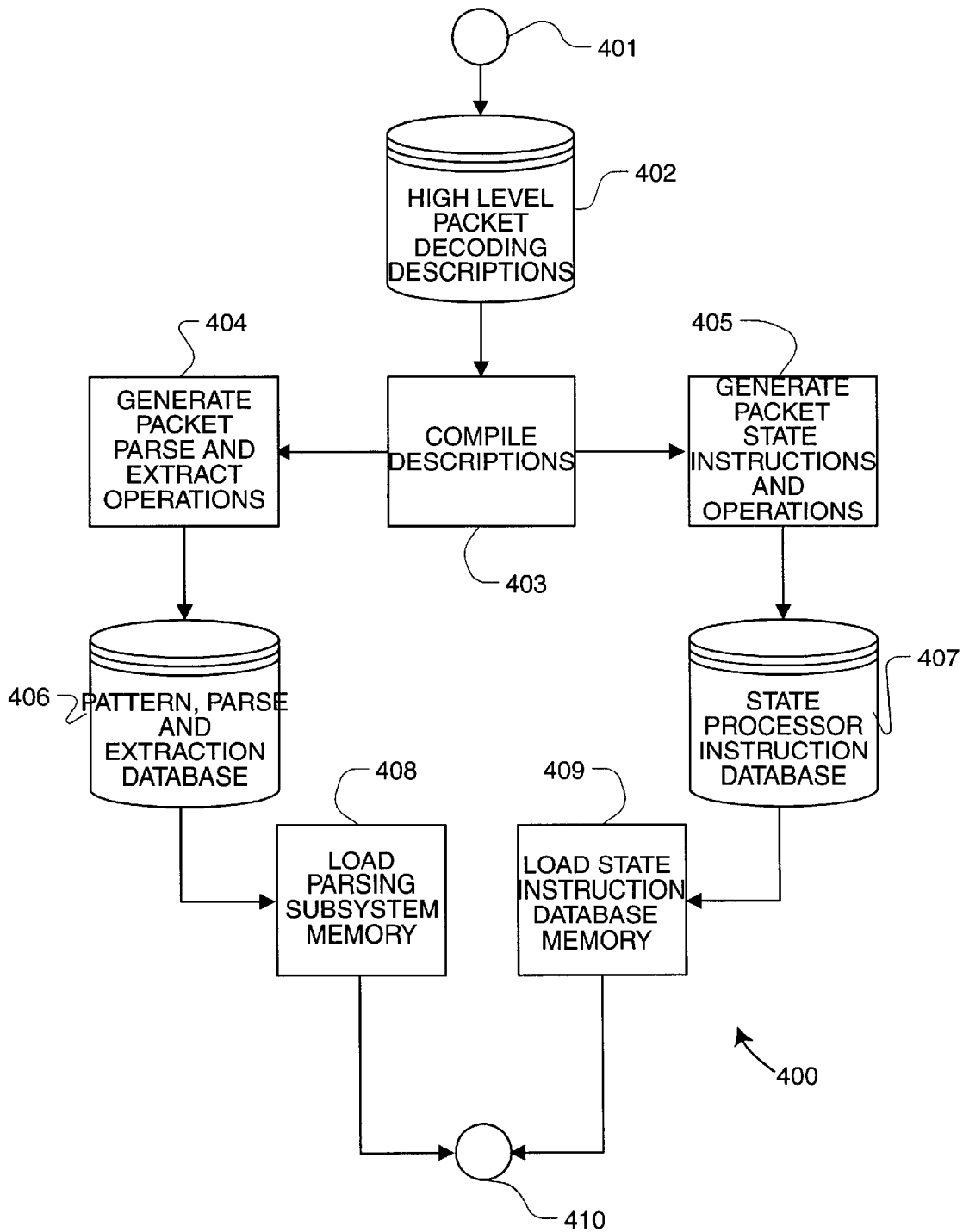


FIG. 4

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