(12) **United States Patent**
Riddle

(10) **Patent No.:** **US 7,385,924 B1**
(45) **Date of Patent:** **Jun. 10, 2008**

(54) **ENHANCED FLOW DATA RECORDS INCLUDING TRAFFIC TYPE DATA**

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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 952 days.

(21) Appl. No.: **10/676,383**

(22) Filed: **Sep. 30, 2003**

(51) **Int. Cl.**
G01R 31/08 (2006.01)

(52) **U.S. Cl.** **370/235**; 370/252; 370/389

(58) **Field of Classification Search** 370/395.3, 370/395.31, 395.5, 230, 428, 429, 419, 235, 370/359, 381, 389, 392, 252–255, 395.34, 370/395.52; 711/203–209, 211; 709/238–244, 709/223, 224; 726/12, 13; 713/152
See application file for complete search history.

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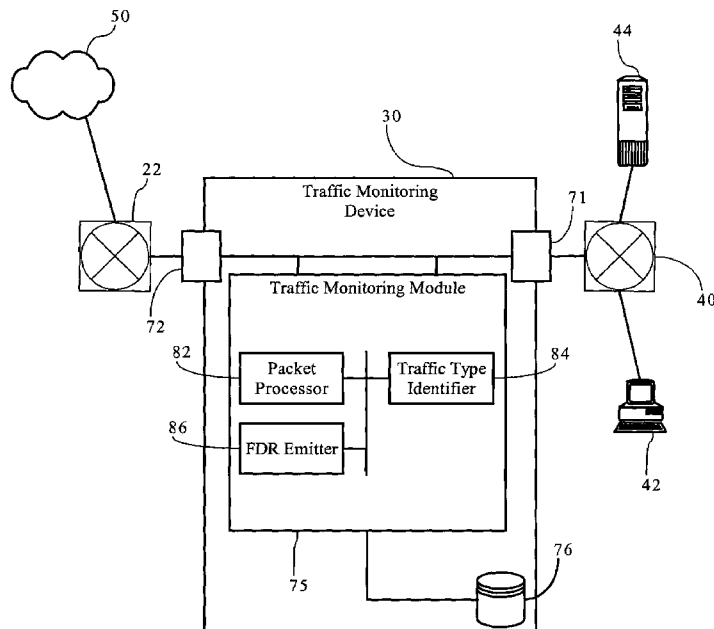
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(57) **ABSTRACT**

Methods, apparatuses and systems directed to a flow-based, traffic-classification-aware data collection and reporting system that combine flow-based data collection technologies with enhanced traffic classification functionality to allow for analysis and reporting into aspects of network operations that prior art systems cannot provide. Embodiments provide enhanced views into the operation of computer network infrastructures to facilitate monitoring, administration, compliance and other tasks associated with networks. When a traffic flow terminates, a traffic monitoring device emits a flow data record (FDR) containing measurements variables and other attributes for an individual flow. A data collector gathers the flow data records and enters them into a database. A network management application can then query the database with selected commands to derive reports characterizing operation of the network suitable to diagnose problems or view conditions associated with the network.
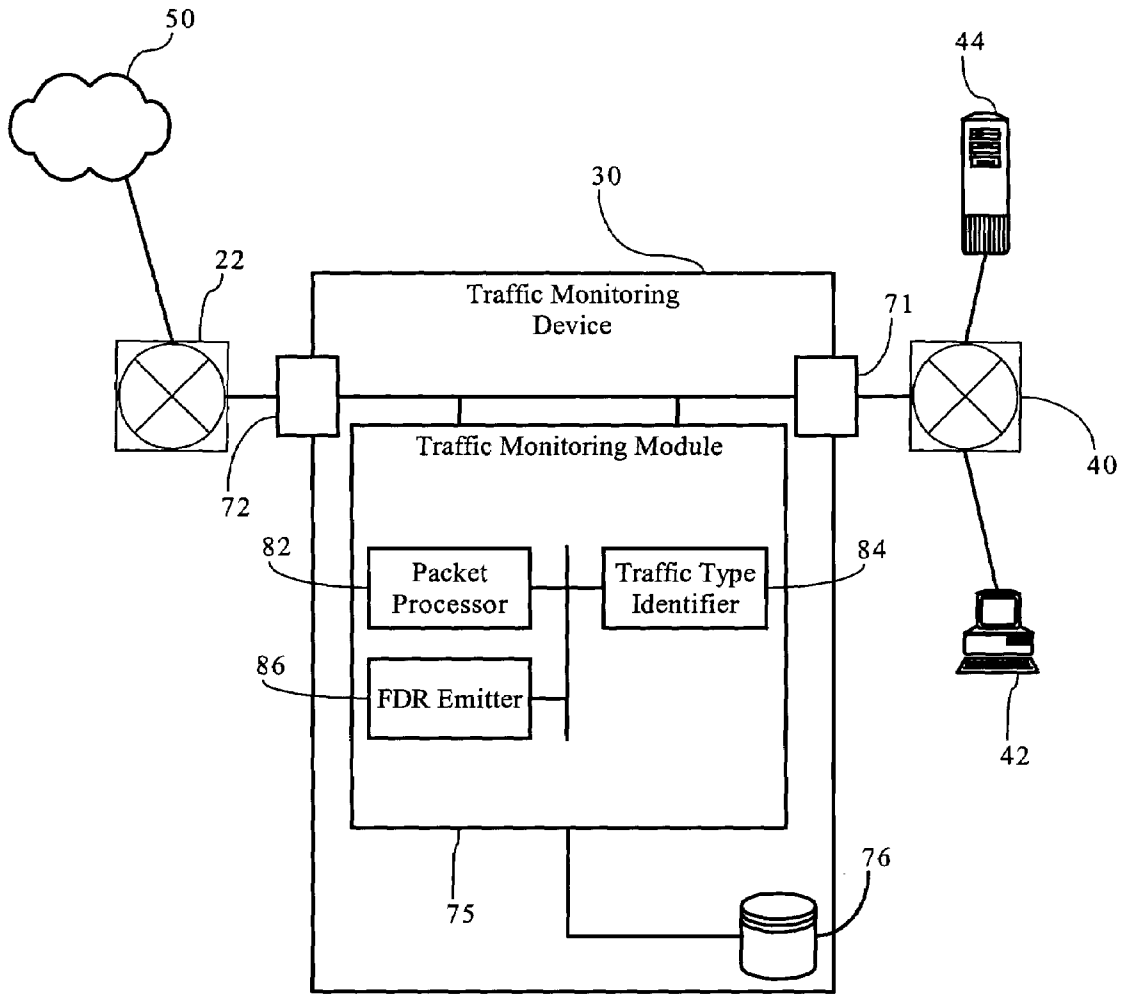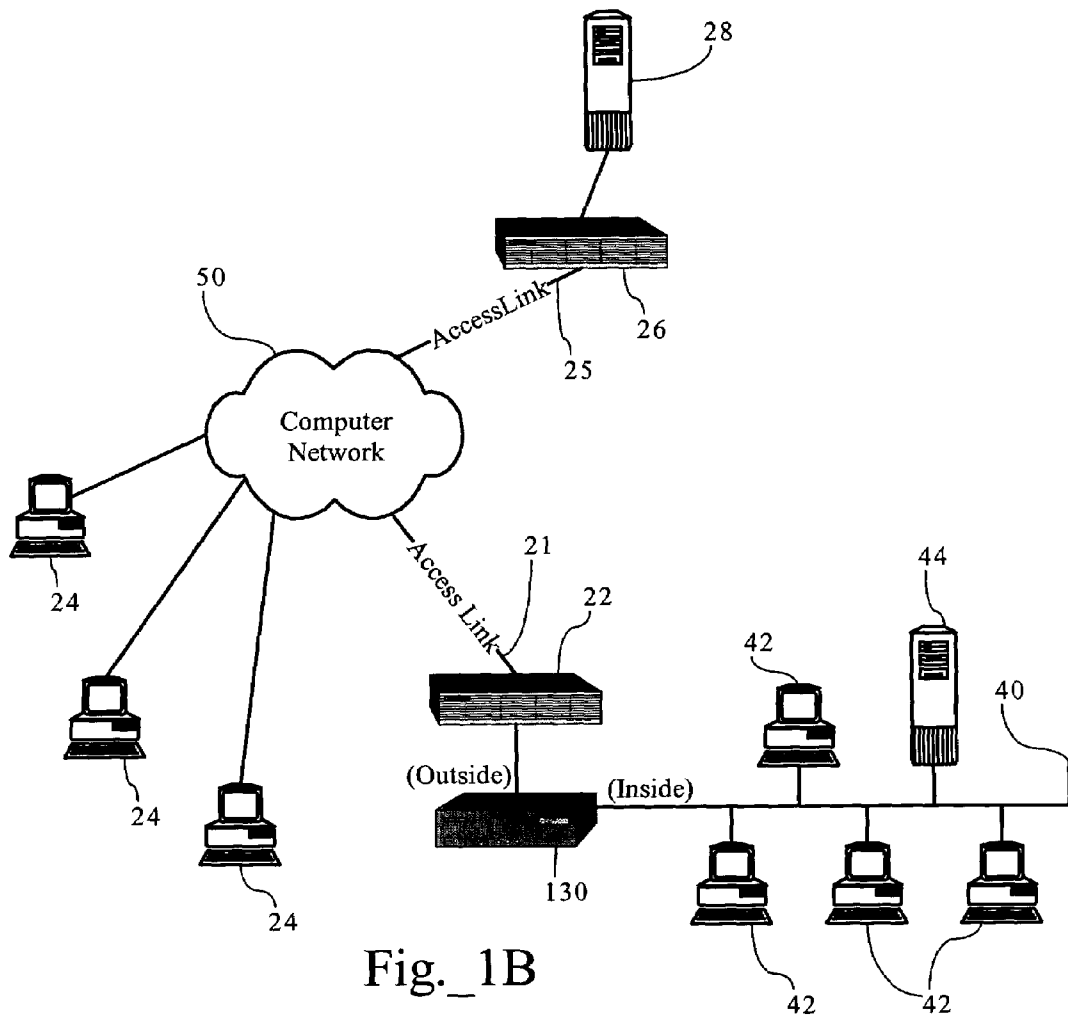
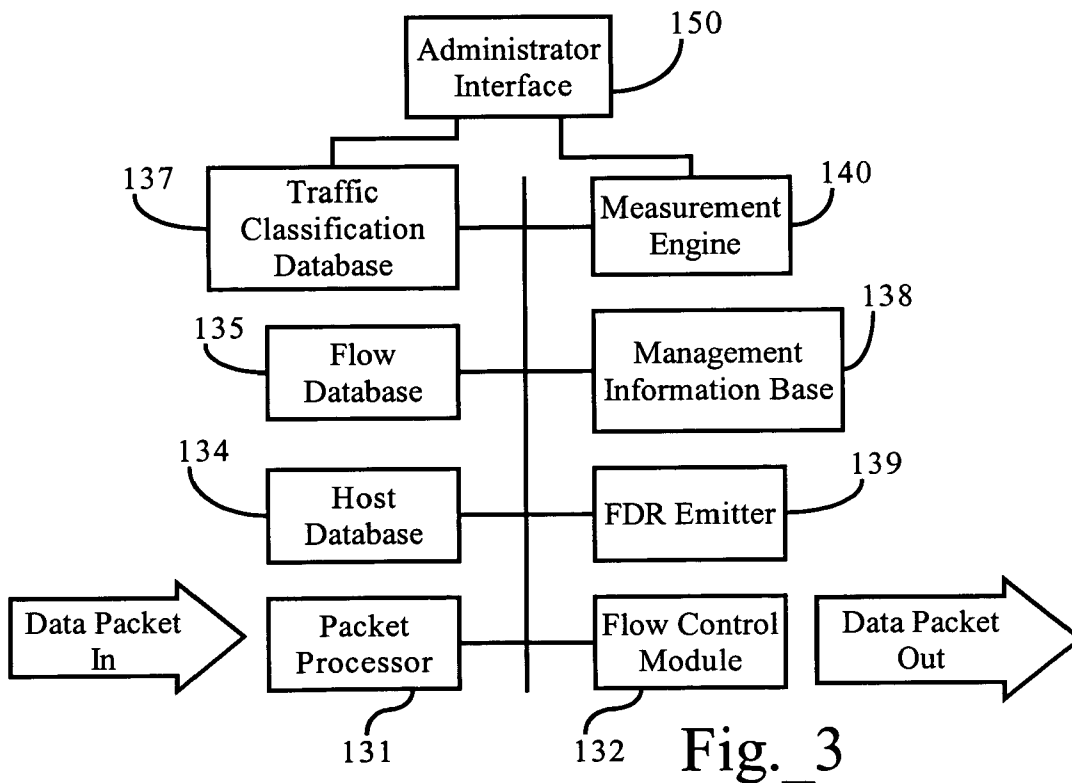**26 Claims, 7 Drawing Sheets**

Fig._1A

Fig._1B

50

21

22

Fig._2

130

Bandwidth
Management
Device

40

44

Data
Collector

Administrator
Interface

150

137

Traffic
Classification
Database

Measurement
Engine

140

135

Flow
Database

Management
Information Base

138

134

Host
Database

FDR Emitter

139

Data Packet
In

Packet
Processor

Flow Control
Module

Data Packet
Out

131

132

Fig._3

Fig._4

DOCKET ALARM
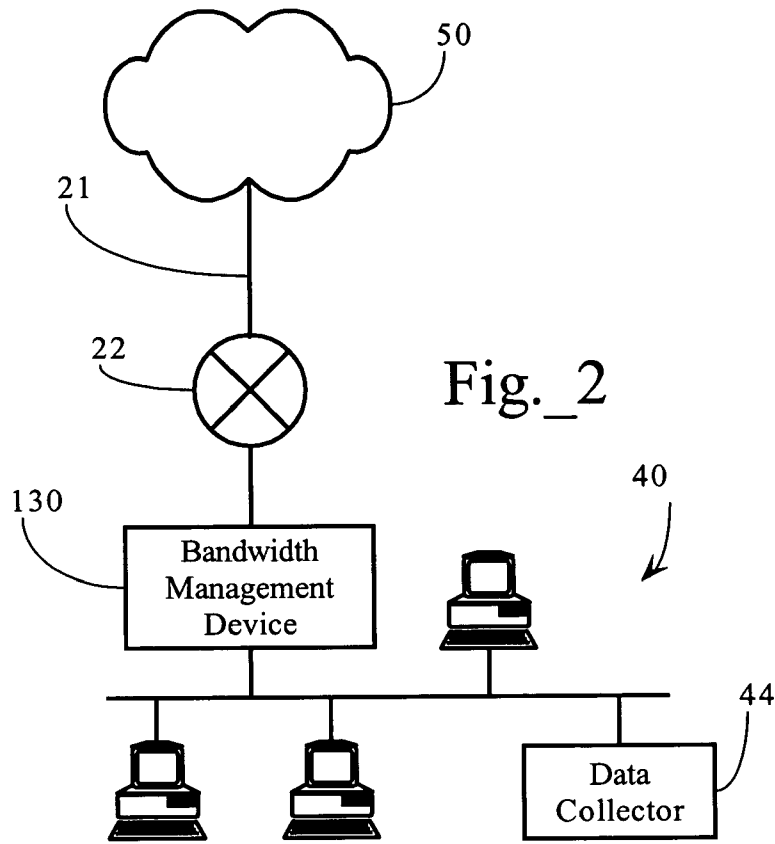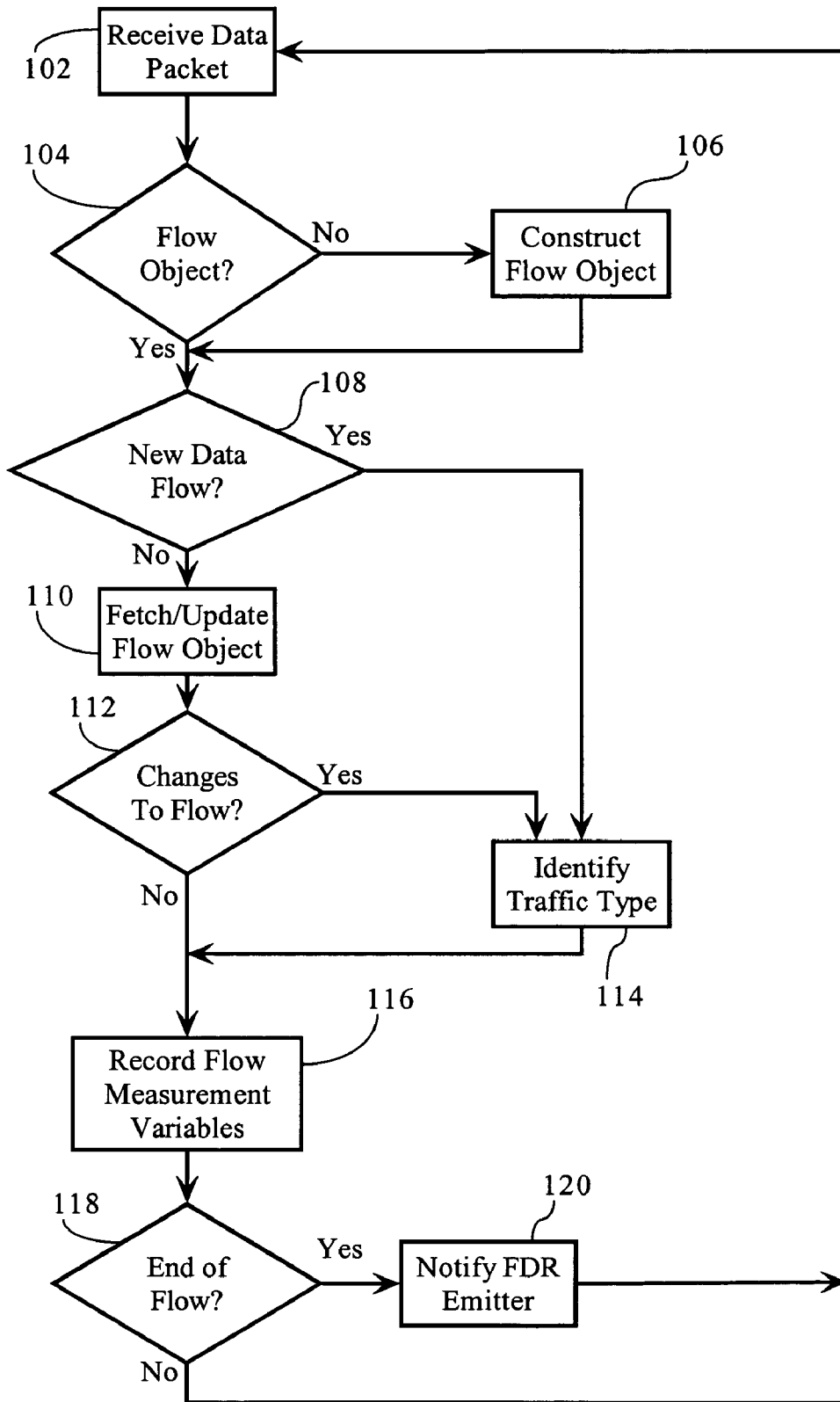
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