



US006580916B1

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

(10) **Patent No.:** **US 6,580,916 B1**
(45) **Date of Patent:** **Jun. 17, 2003**

(54) **SERVICE FRAMEWORK FOR EVALUATING
REMOTE SERVICES BASED UPON
TRANSPORT CHARACTERISTICS**

(75) Inventors: **Bernhard Weisshaar**, Phoenix, AZ (US); **Merlin Smith**, Chandler, AZ (US); **Parvathy Bhaskaran**, Mesa, AZ (US); **Mark Clayton**, Phoenix, AZ (US); **Kungwel Mike Liu**, Chandler, AZ (US)

(73) Assignee: **Motorola, Inc.**, Schaumburg, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days.

(21) Appl. No.: **09/662,307**

(22) Filed: **Sep. 15, 2000**

(51) **Int. Cl.**⁷ **H04M 11/00; H04B 15/00; H04Q 7/20**

(52) **U.S. Cl.** **455/456; 455/414; 342/357; 375/202**

(58) **Field of Search** **455/517, 414, 455/412, 450, 452, 435, 445, 560, 466, 456; 342/357.09; 701/207; 379/196, 211, 210; 375/202; 331/25, 16, 17**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,638,399	A	*	6/1997	Schuchman et al.	370/324
5,930,700	A	*	7/1999	Pepper et al.	455/414
6,091,956	A	*	7/2000	Hollenberg	455/456
6,167,255	A	*	12/2000	Kennedy et al.	455/414

* cited by examiner

Primary Examiner—Vivian Chin

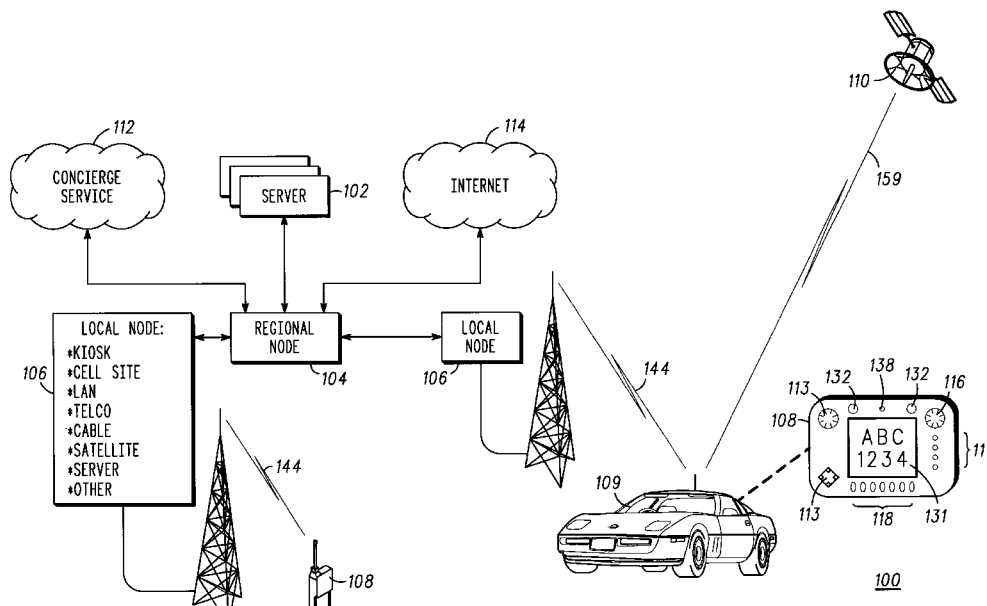
Assistant Examiner—Kamran Afshar

(74) *Attorney, Agent, or Firm*—Kevin D. Wills

(57) **ABSTRACT**

In an information appliance system **100**, a user device **108** comprises a client platform (**200**, FIG. 5) that includes a service framework (**235**, FIG. 5) to discover and connect with a variety of services, both remote and local, transient and persistent, and to disconnect from them when they are no longer of interest or become unavailable. The service framework **235** provides a standard, consistent, simplified way for services to make themselves available and for service-using entities to locate and connect with the services of interest to them. The service framework **235** comprises service event notification registries (**254**, **256**, FIG. 7) in which service-requesting entities register templates defining the types of services they want to locate and connect with. However, the service framework **235**, rather than connecting with any service that matches a desired service type, can further control a remote service lookup operation in accordance with various transport characteristics in the template, such as signal strength, quantity of data to be transferred, range, available bandwidth, communications cost, service location, time of day, vehicular velocity, and so forth. This conserves the platform's memory and bandwidth resources by not connecting with services that would not satisfy a user's request or that would be unduly transitory. Various methods of operating a service framework are also described.

12 Claims, 11 Drawing Sheets



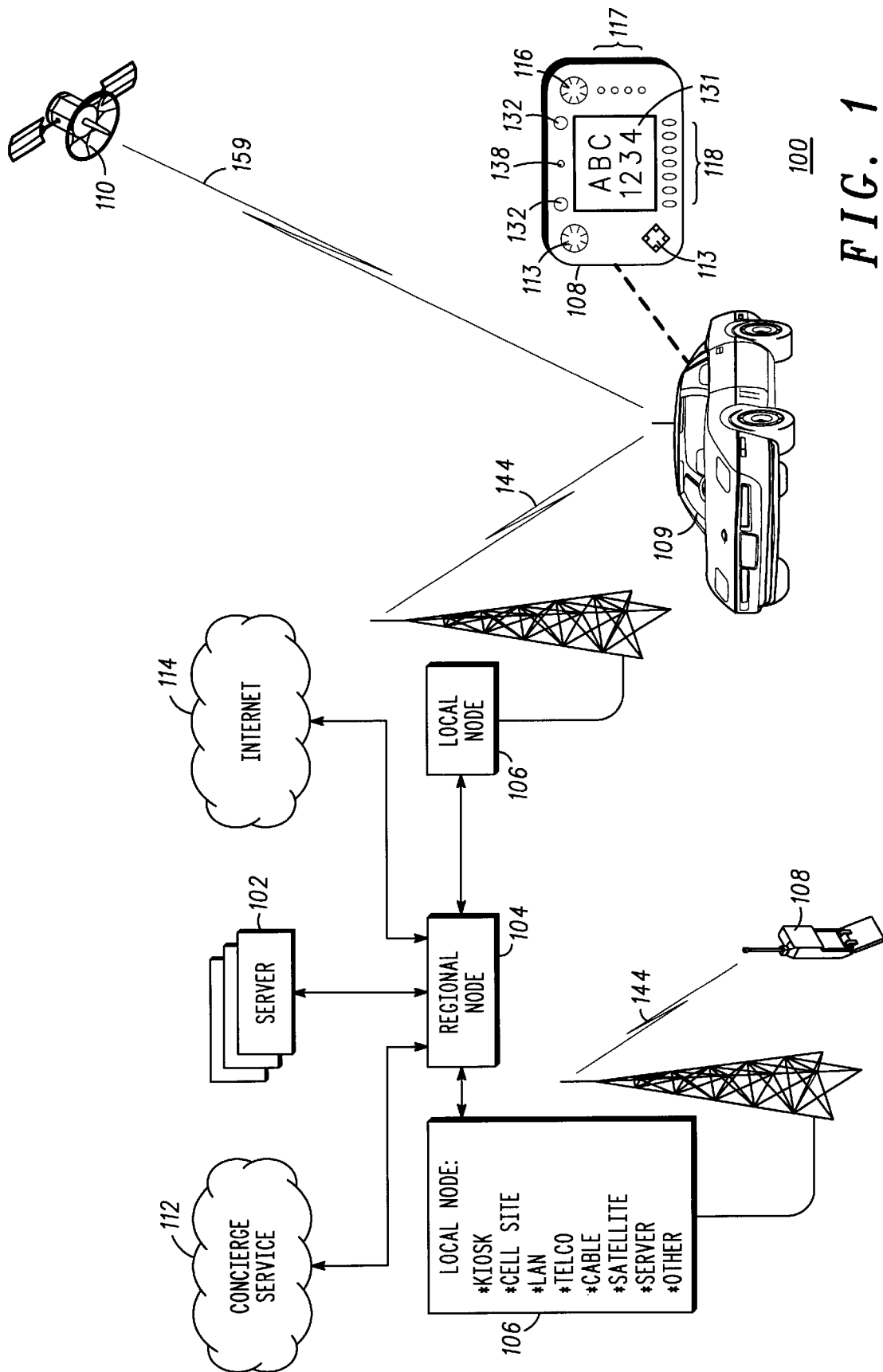


FIG. 1

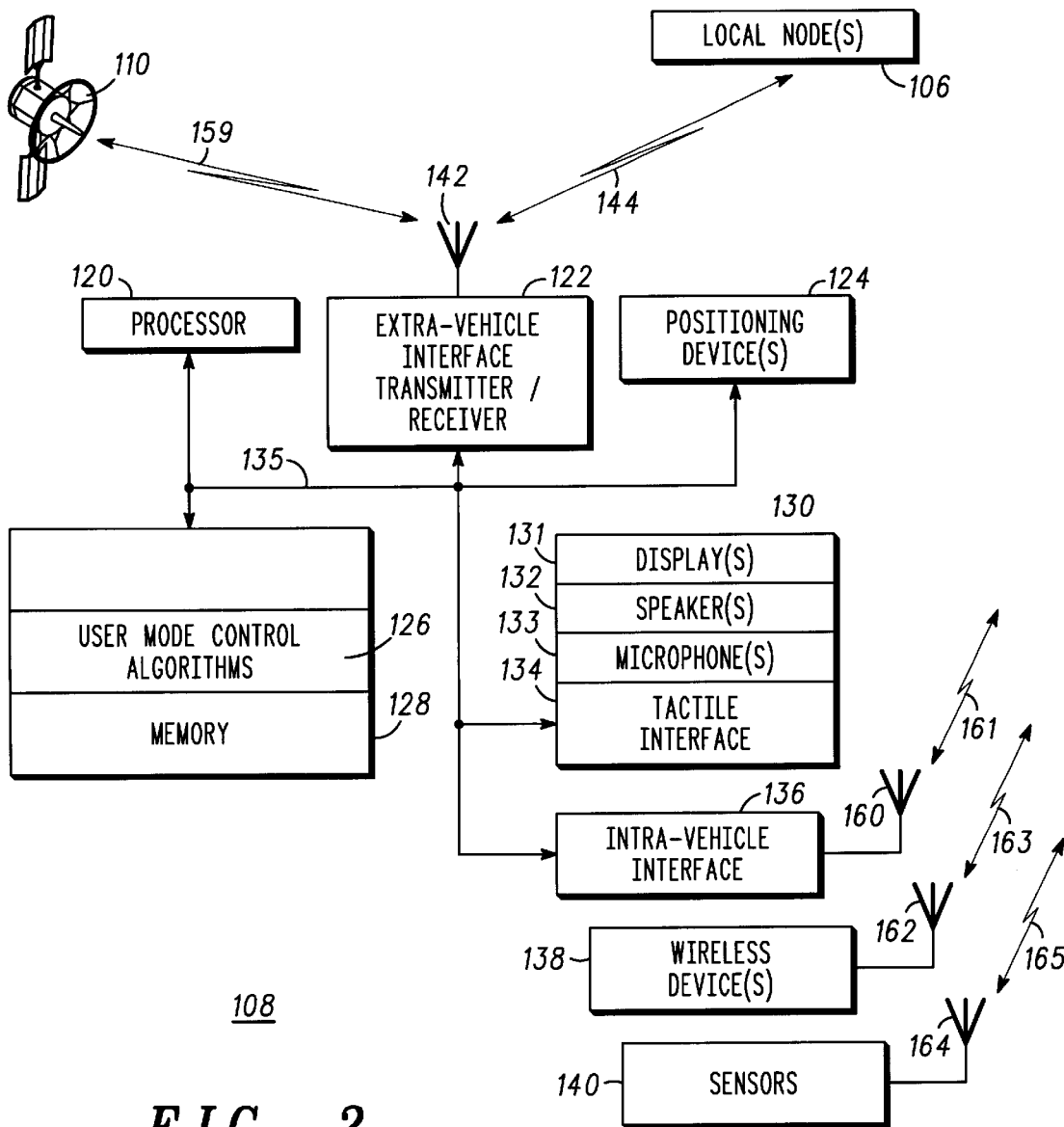


FIG. 2

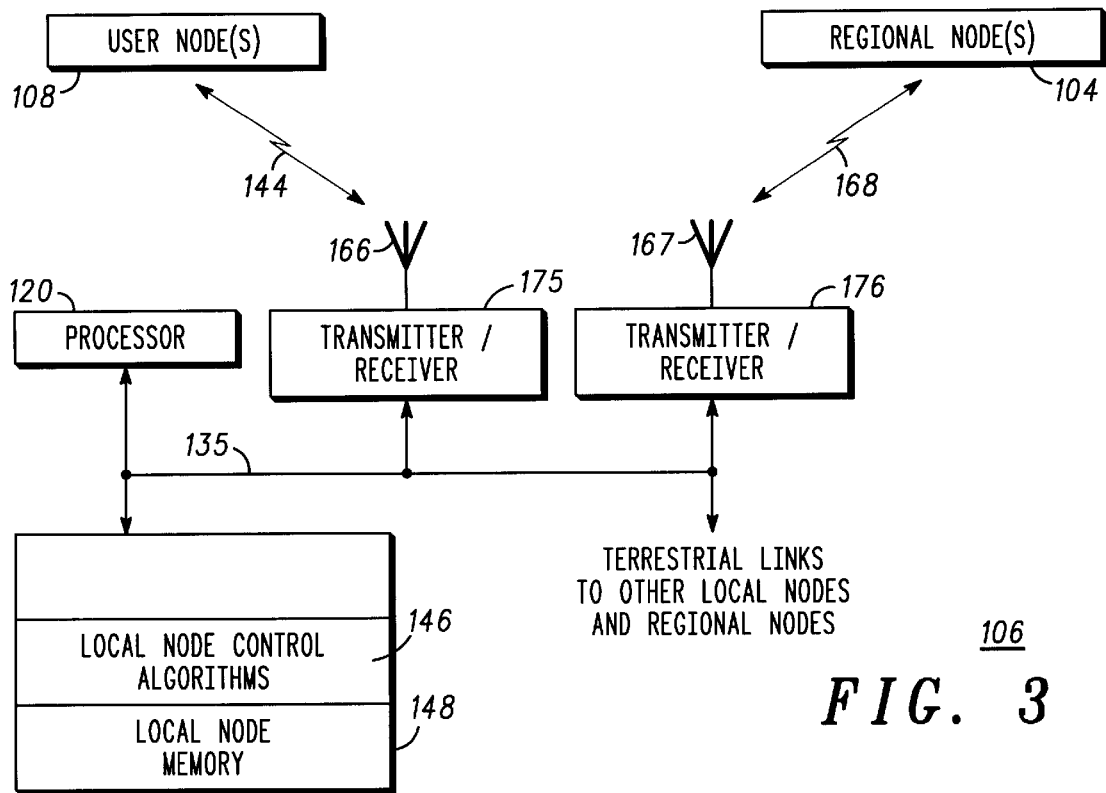


FIG. 3

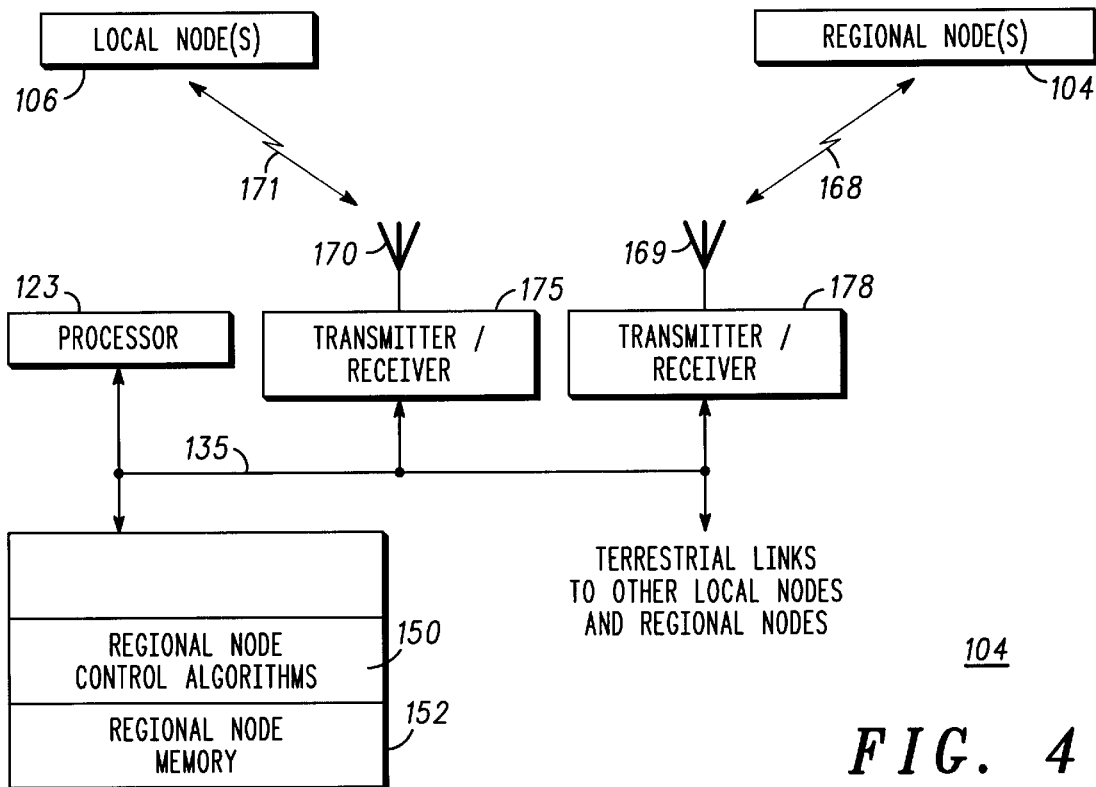
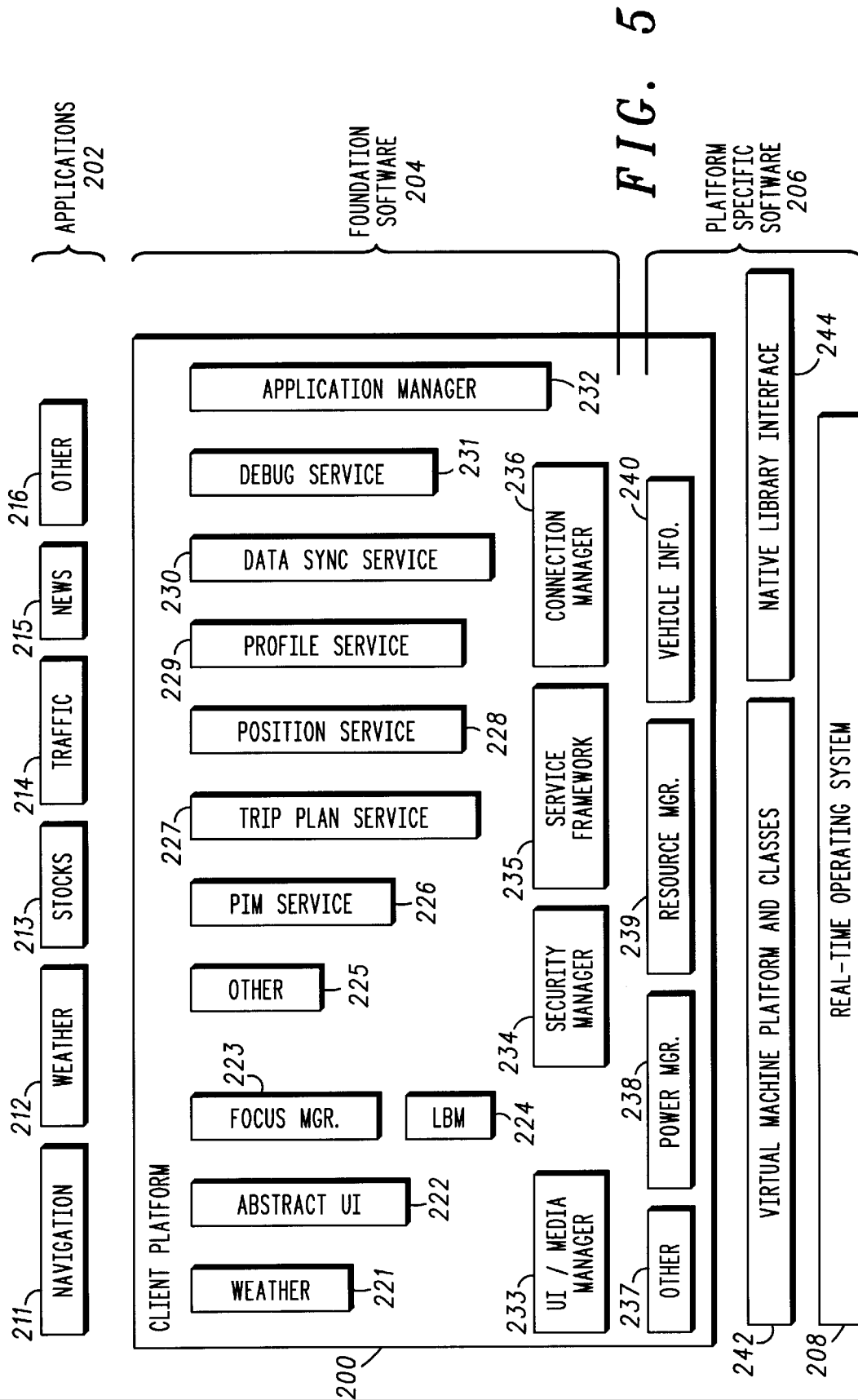


FIG. 4



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.