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Weisshaar et al.

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

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(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

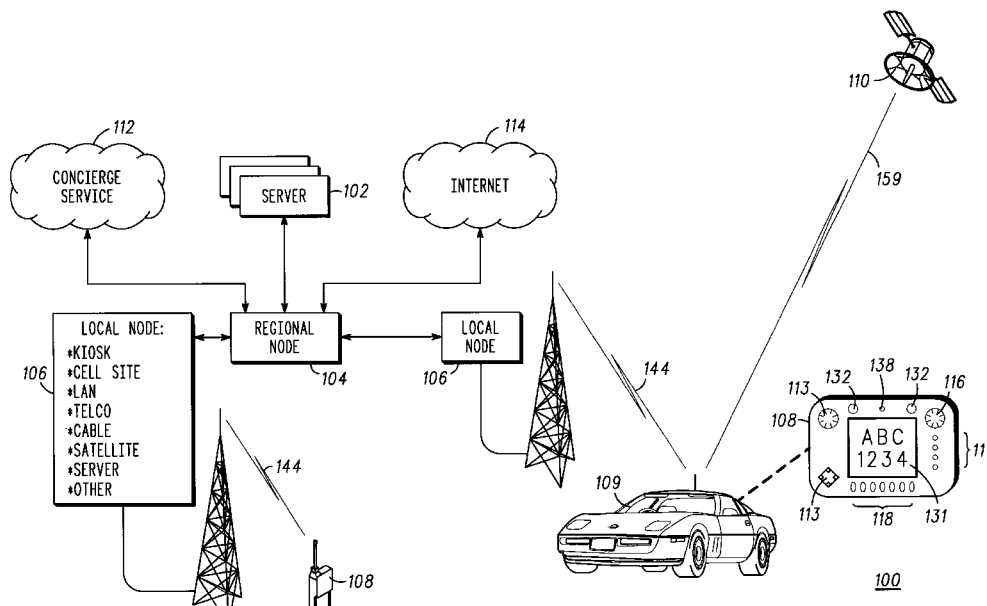
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(57) **ABSTRACT**

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



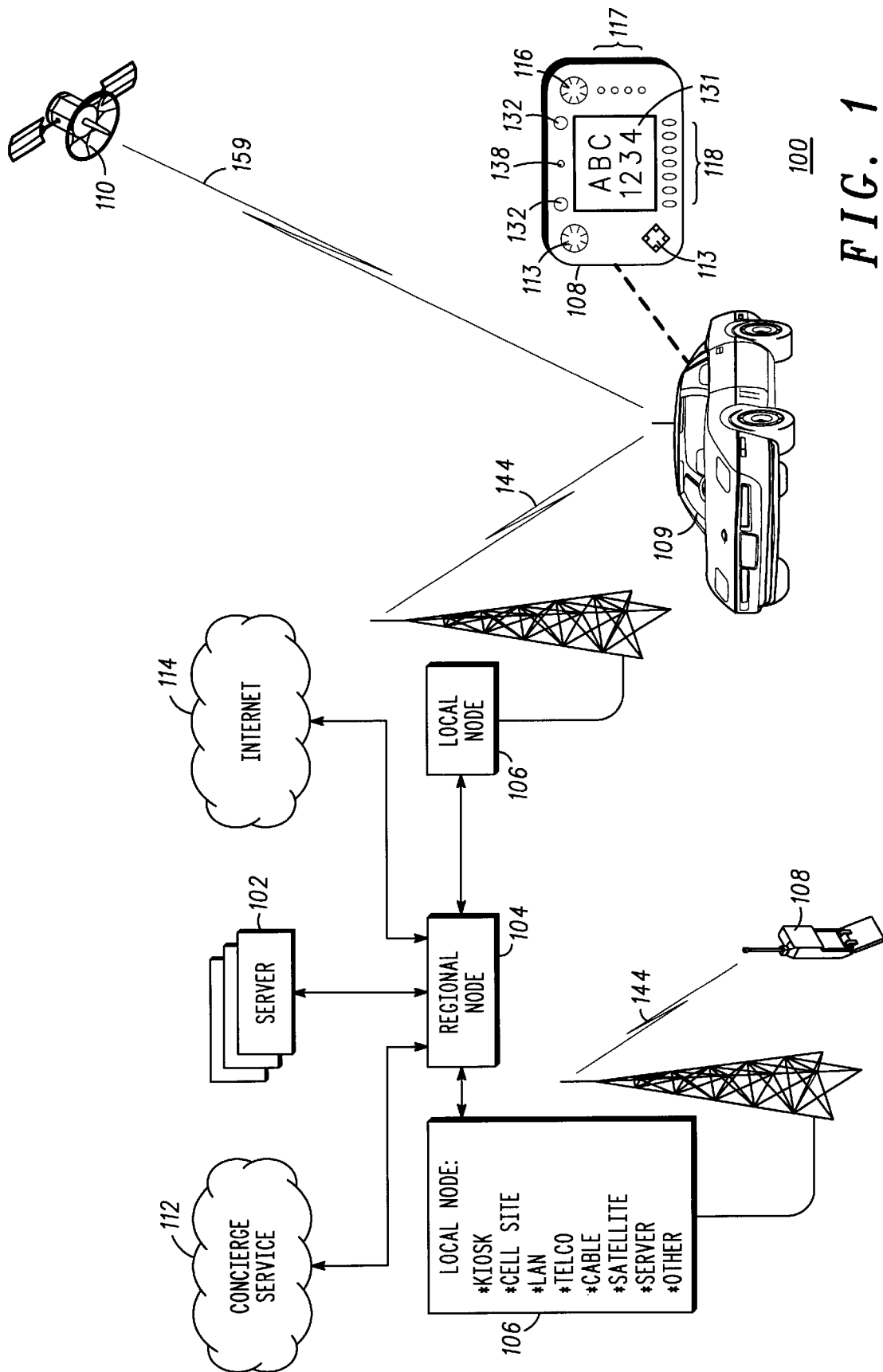
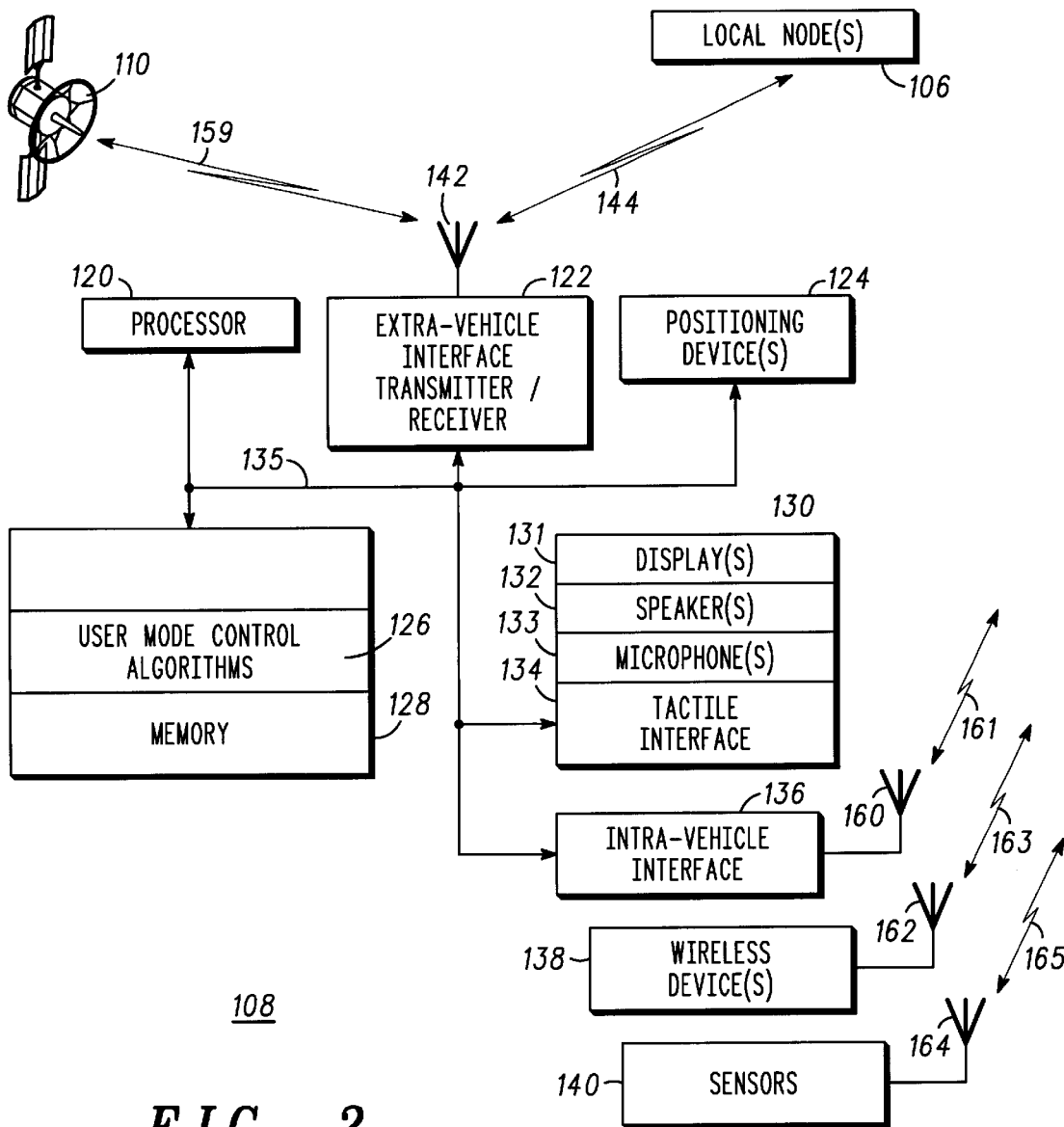
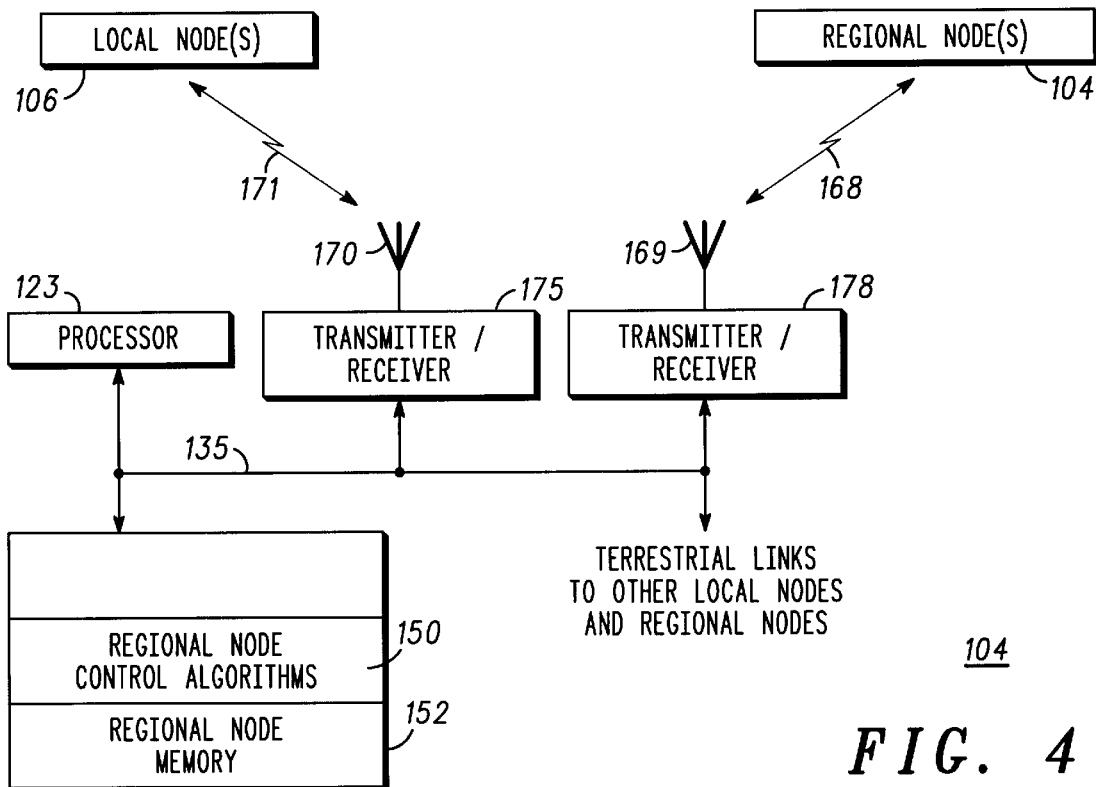
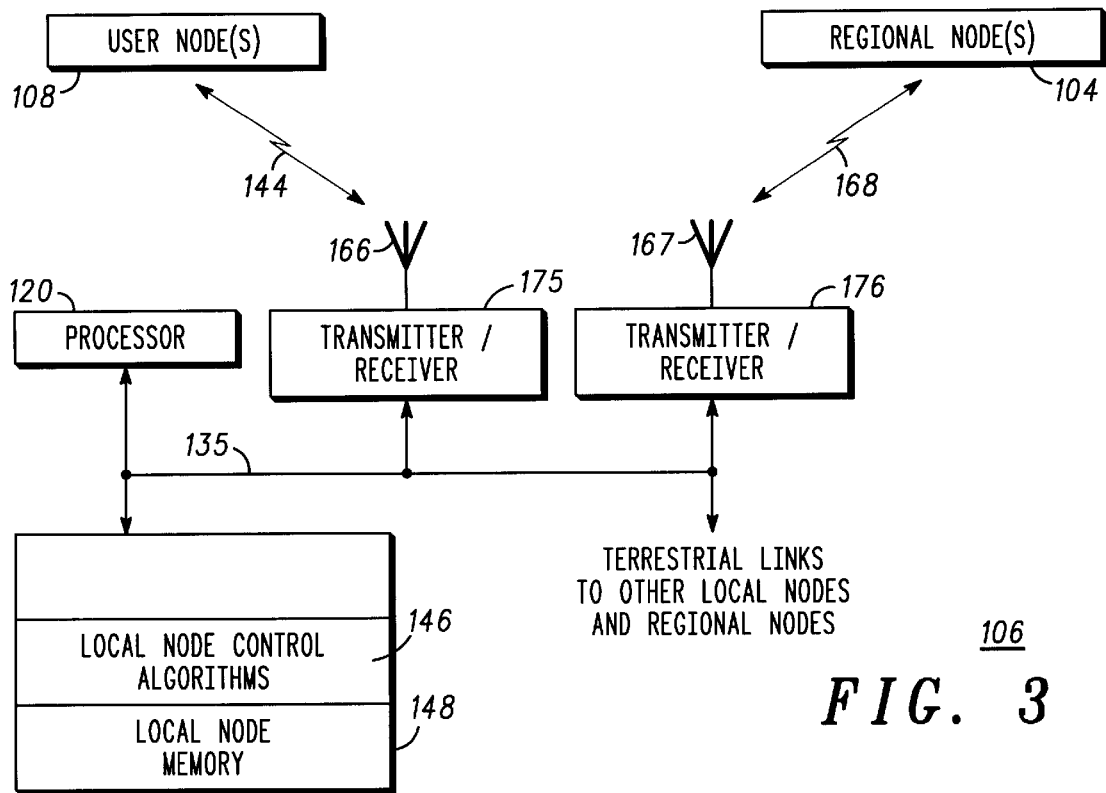


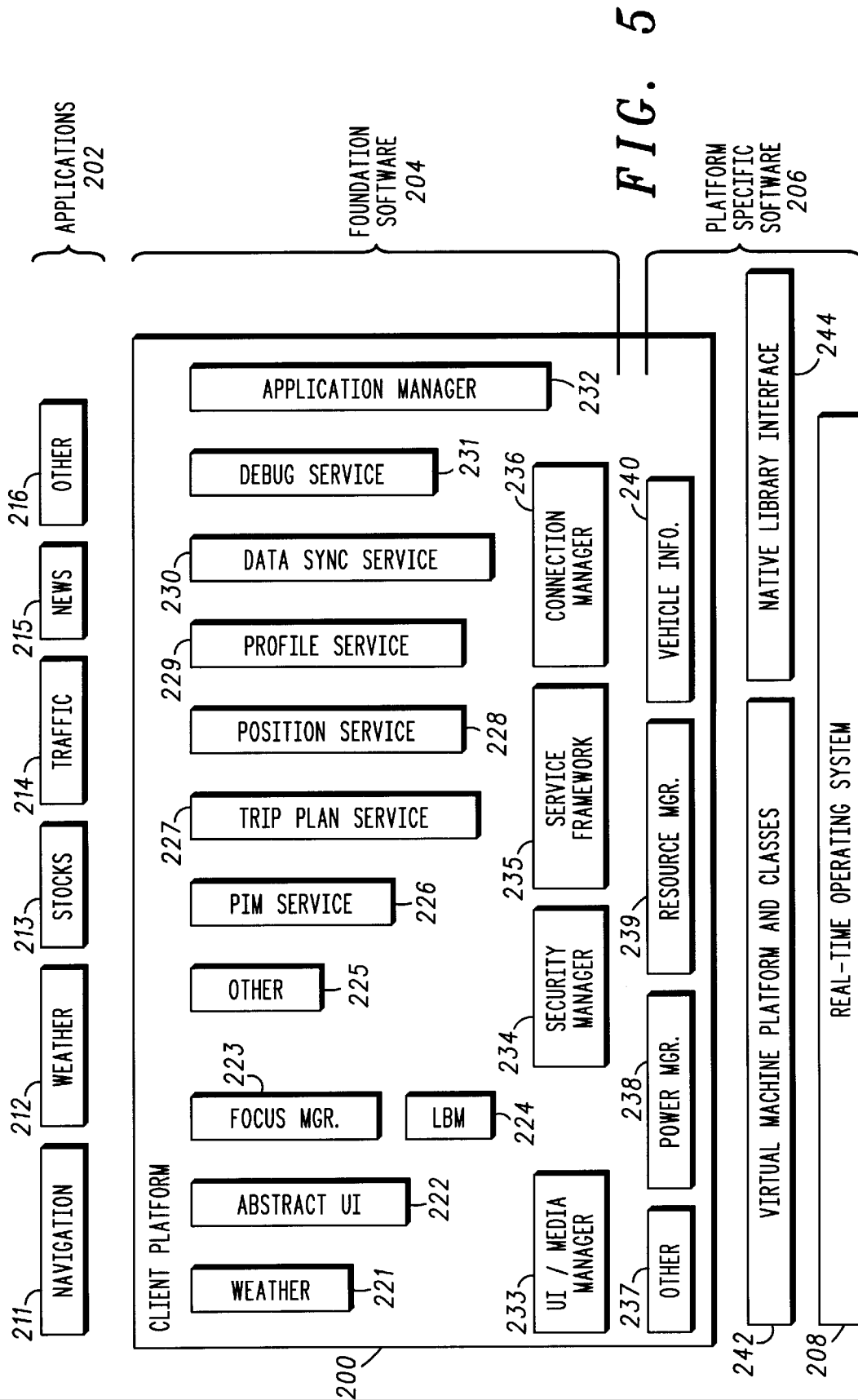
FIG. 1



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FIG. 2





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