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Xu et al.

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- (54) **REMOTE ROAD TRAFFIC DATA COLLECTION AND INTELLIGENT VEHICLE HIGHWAY SYSTEM**
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- (73) Assignee: **Wenking Corp.**, St. Lambert (CA)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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- (30) **Foreign Application Priority Data**
Mar. 19, 1999 (CA) 2266208
- (51) **Int. Cl.**⁷ **G06F 163/00; G06F 165/00; G08G 1/09**
- (52) **U.S. Cl.** **701/117; 701/207; 701/208; 340/988**
- (58) **Field of Search** **701/117, 209, 701/201, 200, 207, 208, 212, 214, 118, 119; 340/988, 990, 995, 905**

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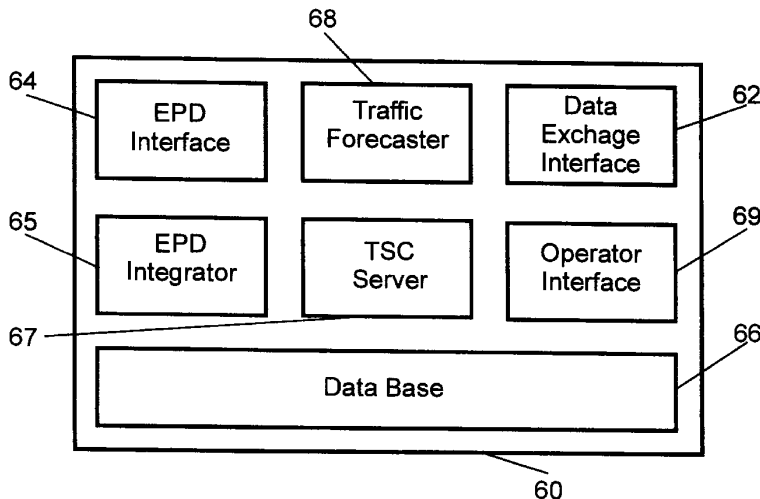
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ABSTRACT

(57) A remote traffic data acquisition and intelligent vehicle highway system for highway vehicles is provided. In-vehicle devices compute time-related vehicle locations on a digitized road network map using information received from a global position system (GPS) and transmit the time-related vehicle locations to a traffic service center. The traffic service center collects the data from all equipped vehicles that travel the roadway system in an area within range, processes the data and provide a real-time traffic forecasts. The in-vehicle devices receive the digitized road network map as well as the real-time traffic forecasts and provide route guidance and related services for the drivers using the traffic forecast information. The traffic forecast is based on projections from normal traffic conditions retrieved from archived data adjusted by factors related to real-time situations. The system provides a practical and economic solution for an intelligent highway vehicle system.

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33 Claims, 6 Drawing Sheets



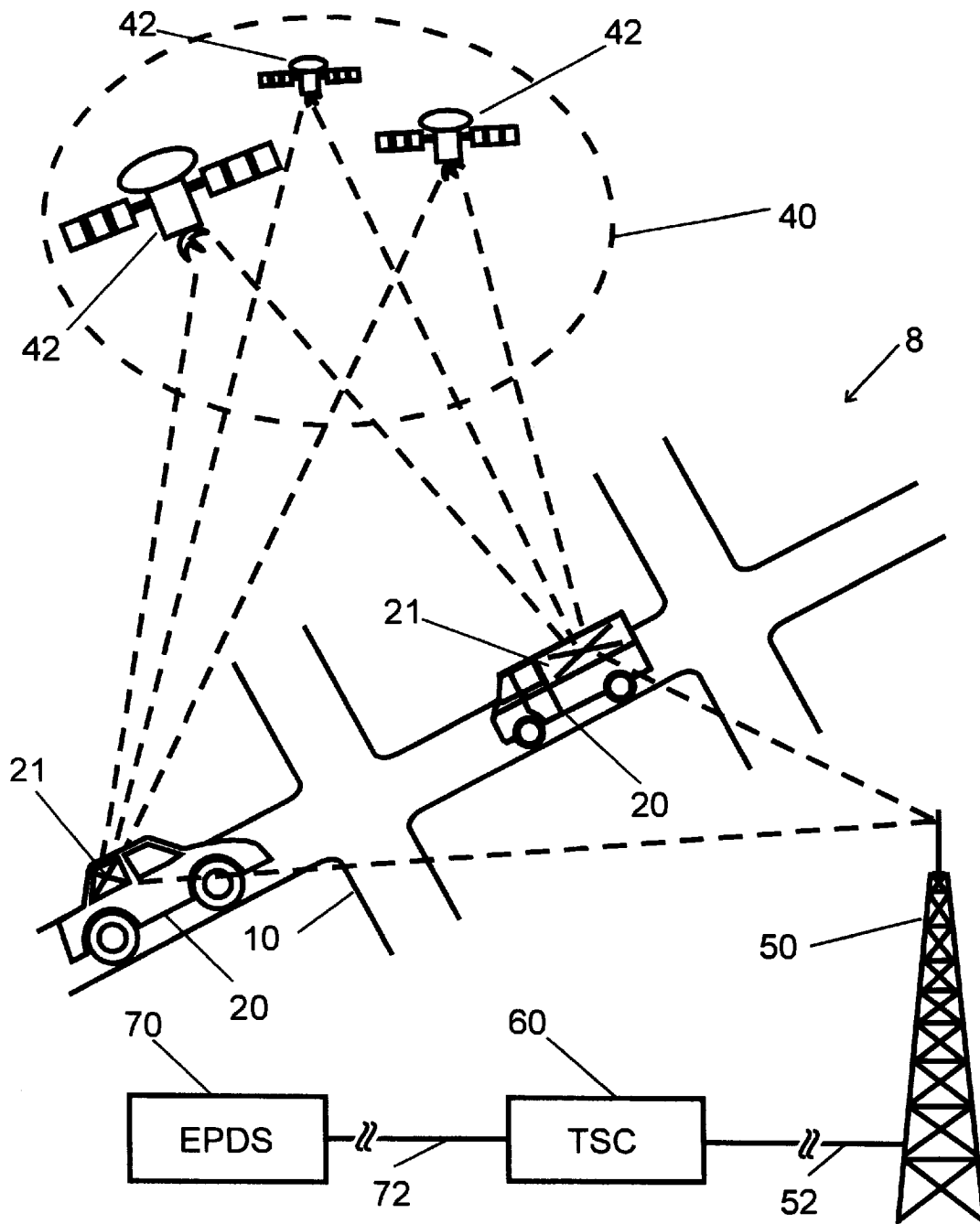


Figure 1

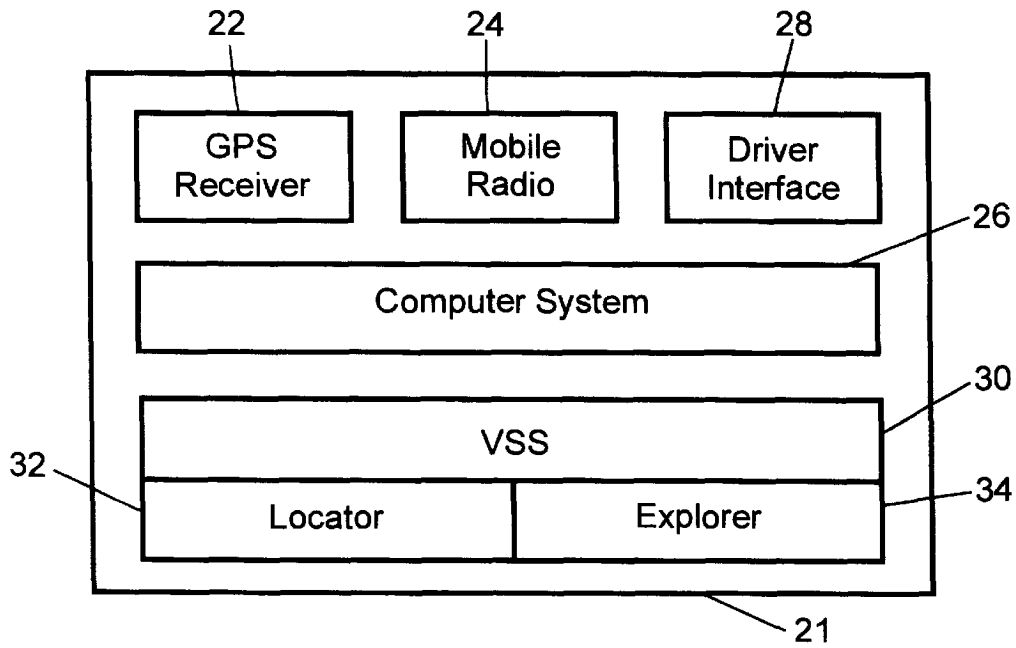


Figure 2

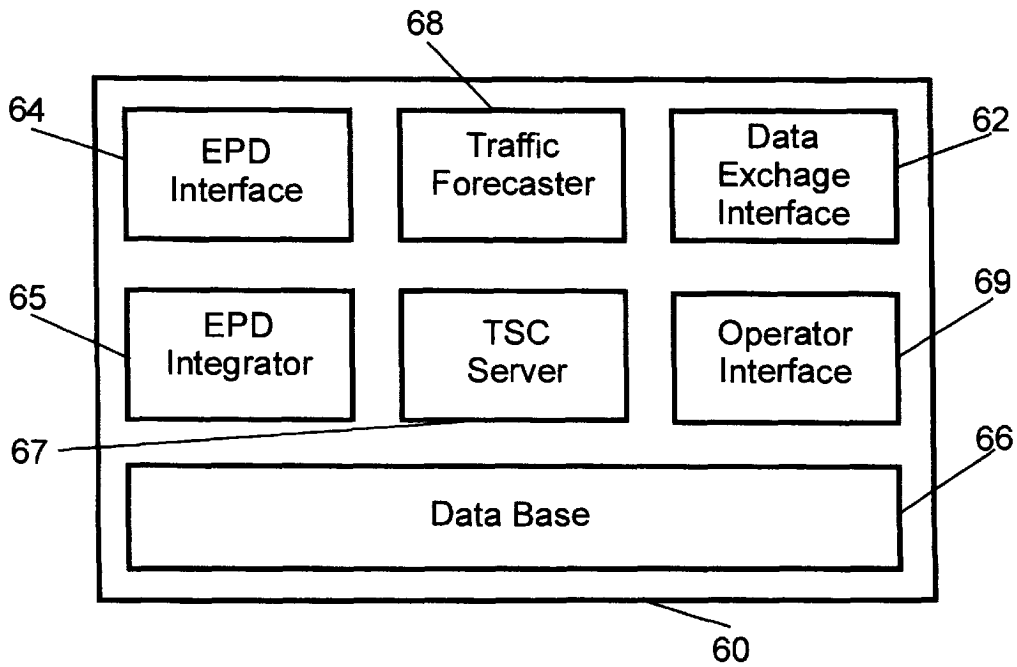


Figure 3

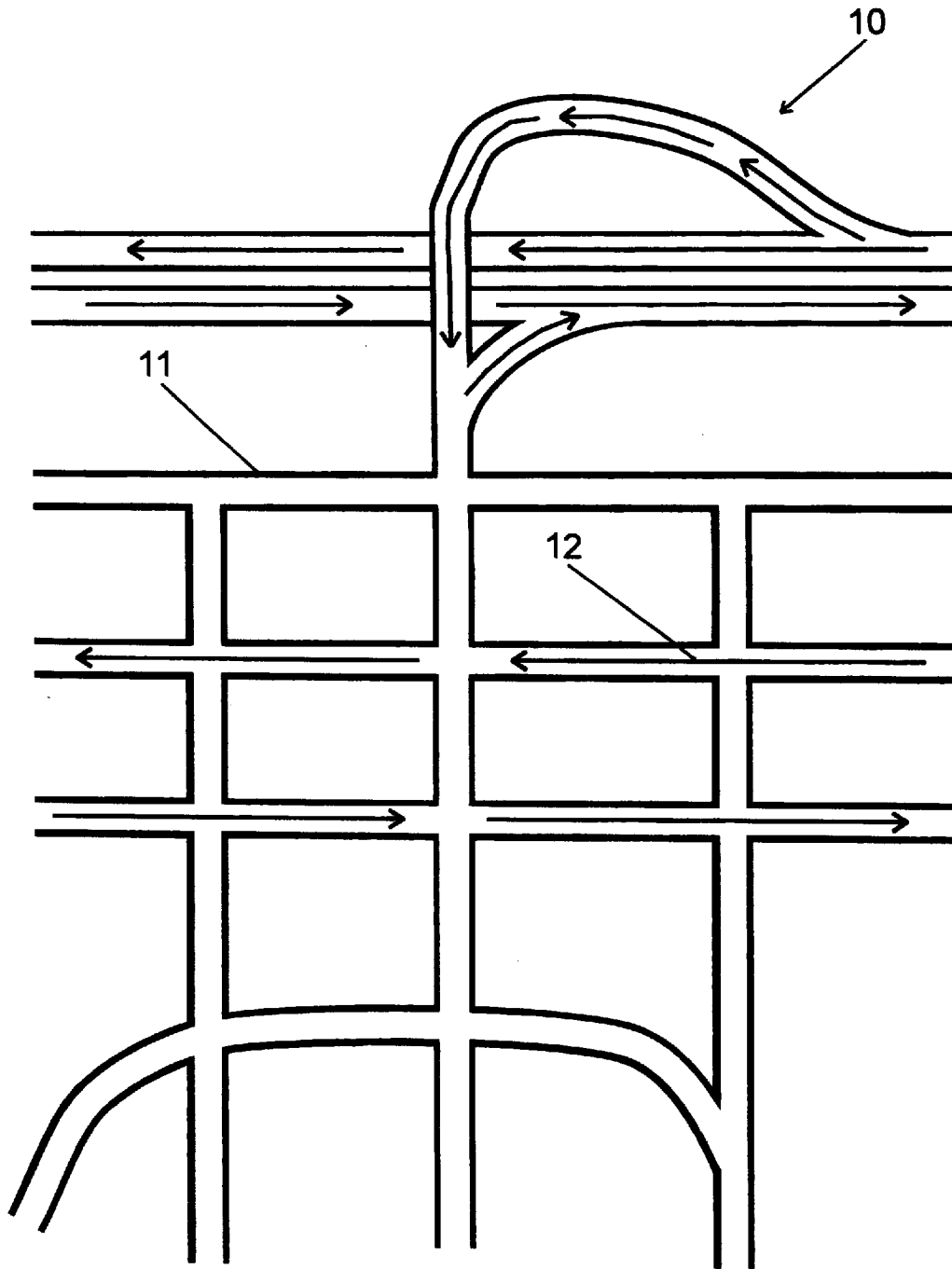


Figure 4

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