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Beckert et al.

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- (54) **VEHICLE COMPUTER SYSTEM WITH OPEN PLATFORM ARCHITECTURE**
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- (*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.

This patent is subject to a terminal disclaimer.
- (21) Appl. No.: **09/394,360**
- (22) Filed: **Sept. 10, 1999**

4,207,511	6/1980	Radtko	320/6
4,365,280	12/1982	Crosetti et al.	360/137
4,477,764	10/1984	Pollard	320/62
4,481,512	11/1984	Tscheulin et al.	340/825.25
4,497,038	1/1985	Diepold-Scharnitzky et al.	395/290
4,868,715	9/1989	Putman et al.	361/814
4,895,326	1/1990	Nimpoeno et al.	248/27.1
4,911,386	3/1990	Putman et al.	248/27.1
5,060,229	10/1991	Tyrell et al.	370/522
5,104,071	4/1992	Kowalski	248/27.1
5,143,343	9/1992	Katz	248/551
5,198,696	3/1993	Dennis	307/10.1
5,316,868	5/1994	Dougherty et al.	429/9
5,424,709	6/1995	Tal	340/310.01
5,488,283	1/1996	Dougherty et al.	320/15
5,569,997	10/1996	Berger	320/15
5,610,376	3/1997	Takagi et al.	200/50.01
5,641,953	6/1997	Fisher, Jr.	200/50.12
5,794,164	* 8/1998	Beckert et al.	701/1
5,859,628	* 1/1999	Ross et al.	345/173
6,009,363	* 12/1999	Beckert et al.	701/33

Related U.S. Application Data

- (63) Continuation of application No. 08/668,781, filed on Jun. 24, 1996, now Pat. No. 6,009,363, which is a continuation-in-part of application No. 08/564,586, filed on Nov. 29, 1995, now Pat. No. 5,794,164.
- (51) **Int. Cl.**⁷ **G06F 7/00**; G01M 17/00
- (52) **U.S. Cl.** **701/33**; 701/1; 361/679; 361/683; 361/731; 361/814; 248/27.1; 455/346; 455/348; 340/825.25
- (58) **Field of Search** 701/1, 29, 33; 340/815.41, 436, 438, 439, 461, 825.25; 455/456, 345, 348; 370/522, 476, 537; 361/814, 679, 728, 747, 683, 686, 600, 729, 730, 731; 248/27.1, 27.3, 551

References Cited

U.S. PATENT DOCUMENTS

4,068,175 1/1978 Maniaci 455/345

* cited by examiner

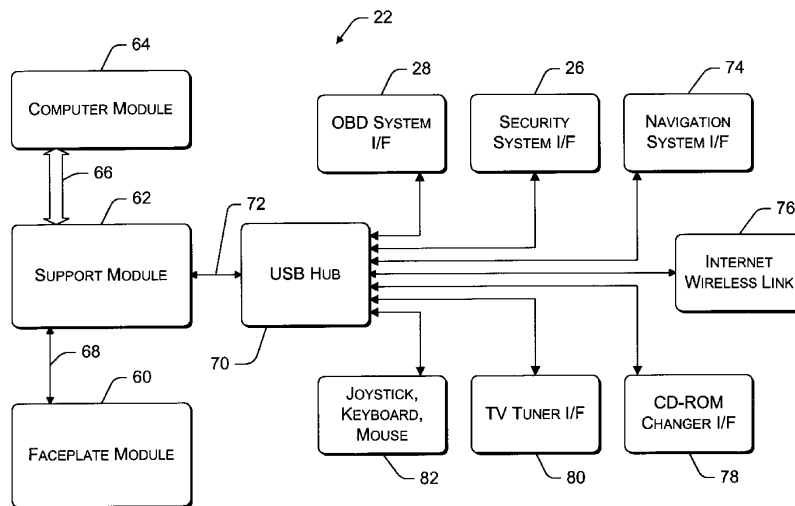
Primary Examiner—Jacques H. Louis-Jacques

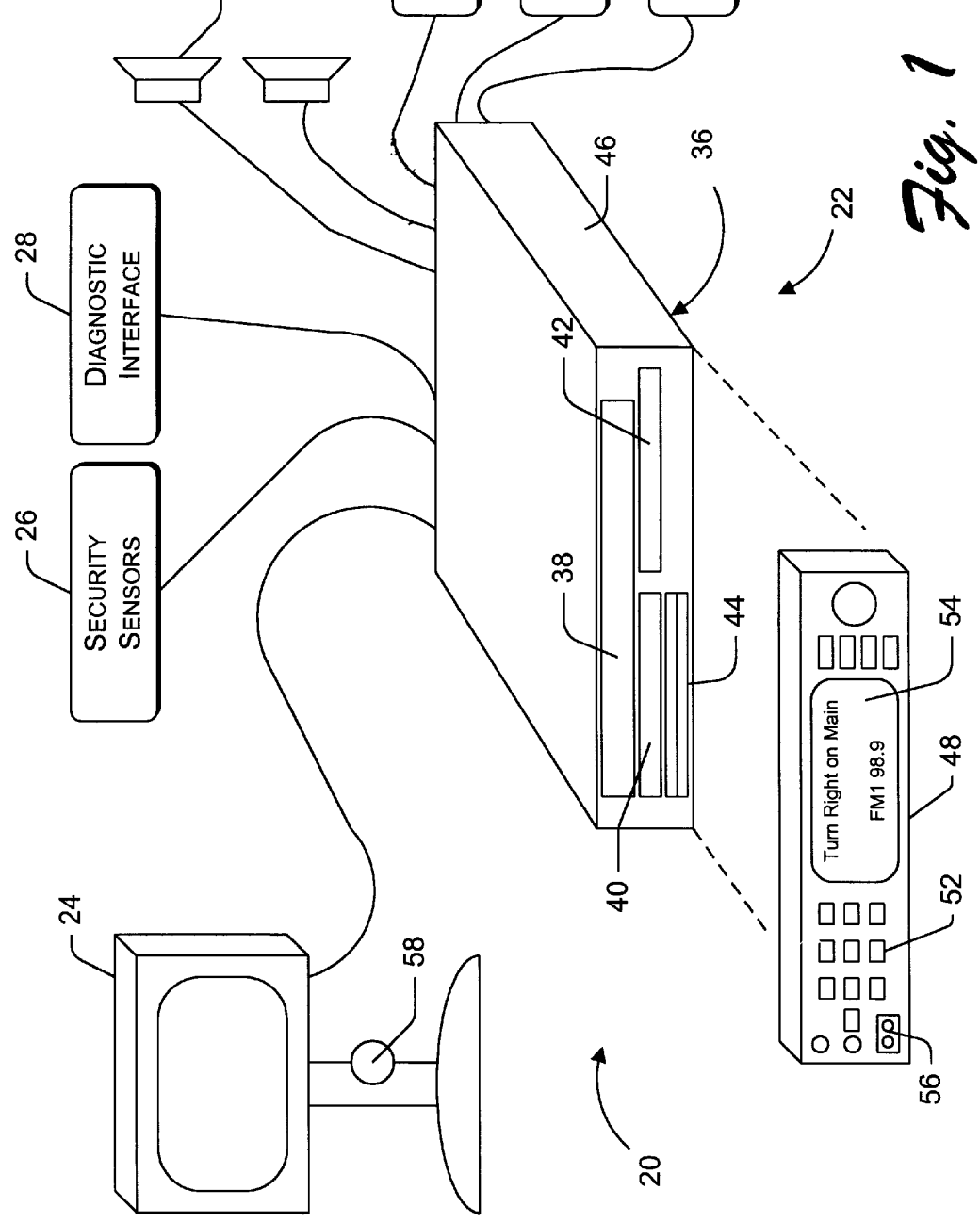
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(57) **ABSTRACT**

A vehicle computer system has a housing sized to be mounted in a vehicle dashboard or other appropriate location. A computer is mounted within the housing and executes an open platform, multi-tasking operating system. The computer runs multiple applications on the operating system, including both vehicle-related applications (e.g., vehicle security application, vehicle diagnostics application, communications application, etc.) and non-vehicle-related applications (e.g., entertainment application, word processing, etc.). The applications may be supplied by the vehicle manufacturer and/or by the vehicle user.

20 Claims, 10 Drawing Sheets





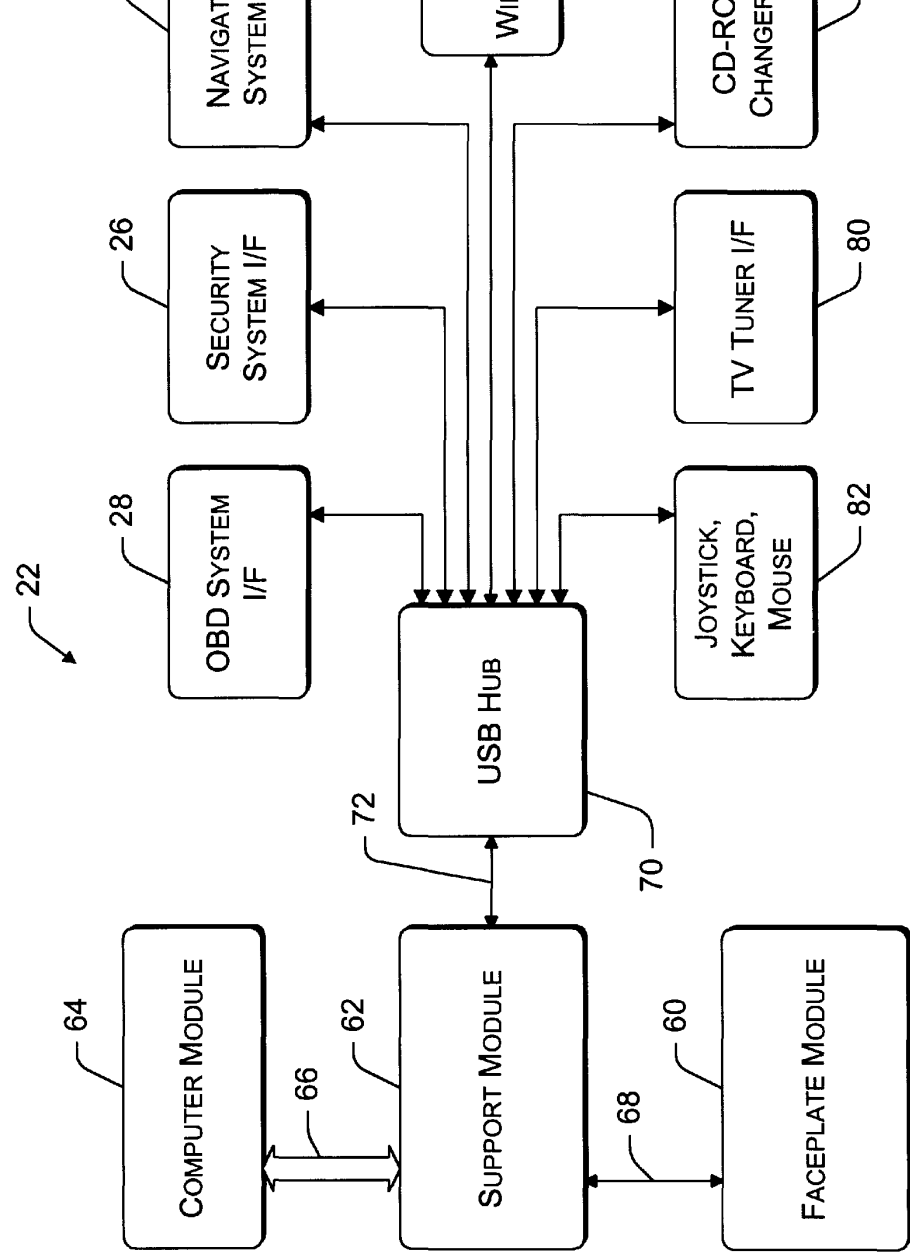


Fig. 2

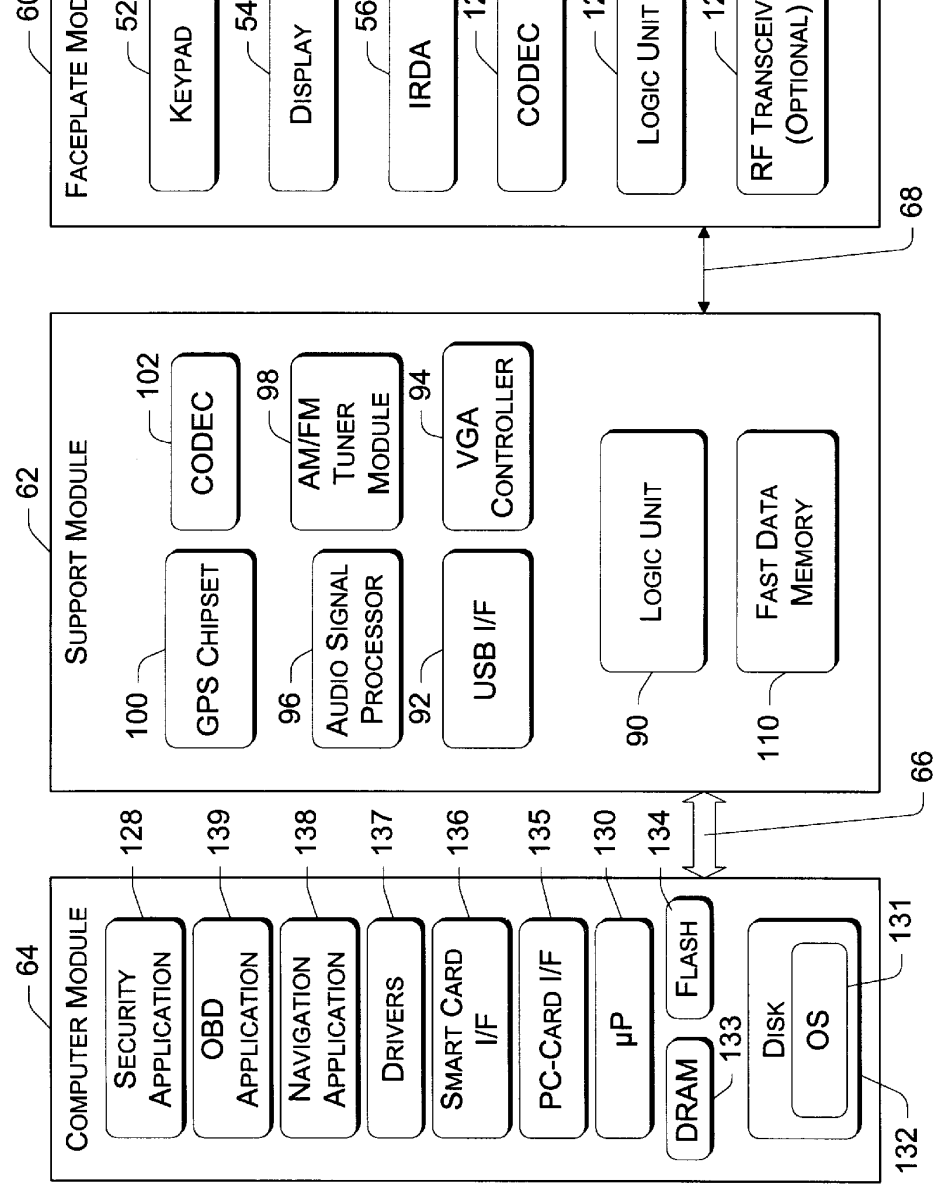


Fig. 3

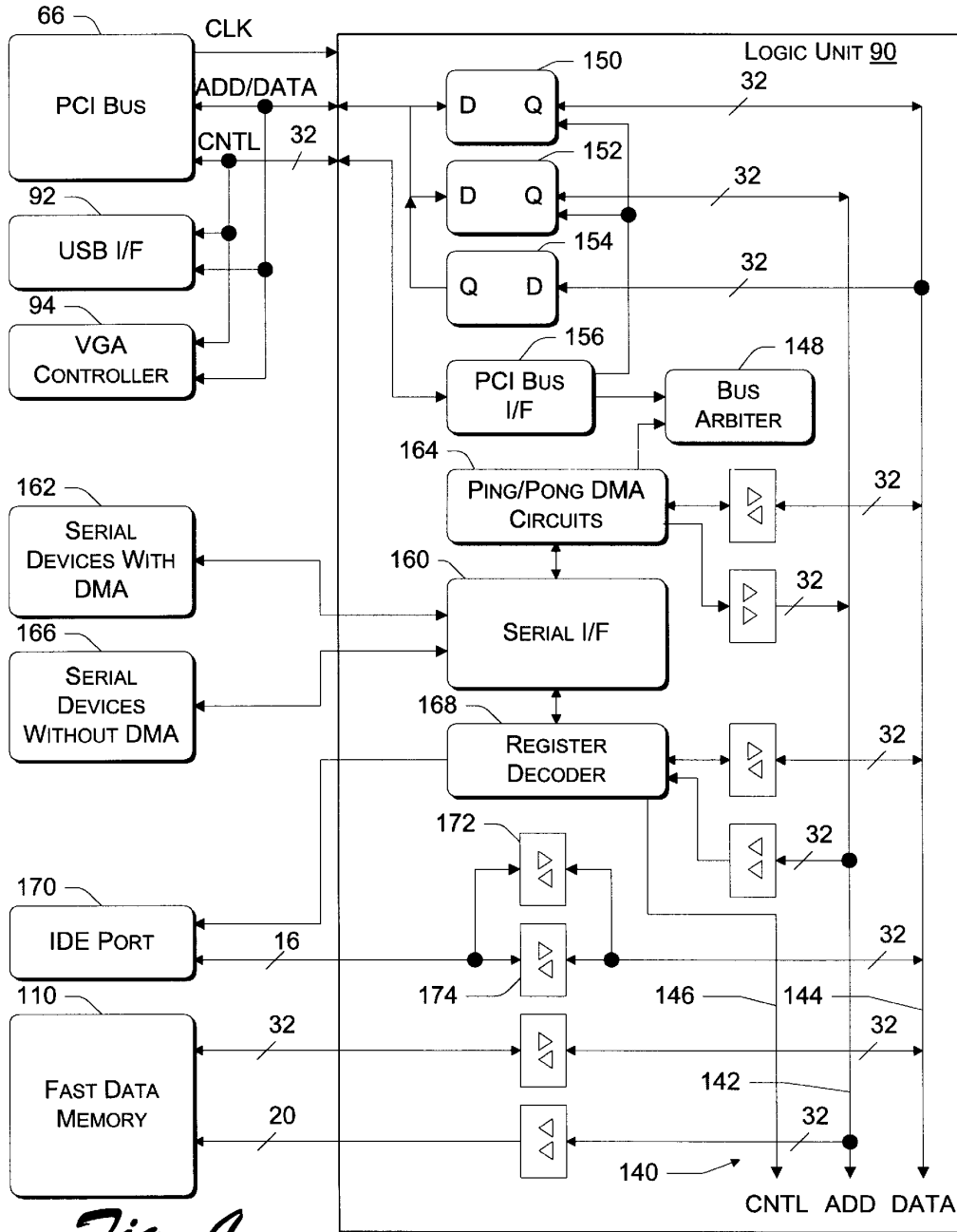


Fig. 4

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