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United States Patent [19]

Lichtman et al.

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[54] **SYSTEM FOR CONFIGURING DEVICES FOR A COMPUTER SYSTEM**

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[52] **U.S. Cl.** **395/200.5**; 395/828; 395/830; 395/200.56

[58] **Field of Search** 395/600, 828, 395/830, 882, 500, 700, 200.56, 200.5

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,268,901	5/1981	Subrizi et al.	364/200
4,317,183	2/1982	Shimizu et al.	364/900
4,562,535	12/1985	Vincent et al.	364/200
4,589,063	5/1986	Shah et al.	364/200
4,660,141	4/1987	Ceccon et al.	364/200
4,727,475	2/1988	Kiremidjian	364/200
4,730,251	3/1988	Aakre et al.	364/200
4,974,151	11/1990	Advani et al.	364/200
4,982,325	1/1991	Tignor et al.	364/200
5,038,294	8/1991	Arakawa et al.	364/491
5,109,484	4/1992	Hughes et al.	395/200
5,136,709	8/1992	Shirakabe et al.	395/700
5,157,384	10/1992	Greanias et al.	340/706
5,197,093	3/1993	Knuth et al.	379/61
5,247,682	9/1993	Kondou et al.	395/700
5,249,270	9/1993	Stewart et al.	395/200
5,252,951	10/1993	Tannenbaum et al.	345/156
5,257,368	10/1993	Benson et al.	395/600
5,257,379	10/1993	Cwiakala et al.	395/700
5,257,387	10/1993	Richek et al.	395/800
5,263,148	11/1993	Jones, Jr. et al.	395/500
5,289,372	2/1994	Guthrie et al.	364/403
5,297,262	3/1994	Cox et al.	395/325
5,319,790	6/1994	Kumagai	395/800
5,335,350	8/1994	Feldenman et al.	455/17
5,359,713	10/1994	Moran et al.	395/200
5,371,492	12/1994	Lohrbach et al.	340/825.03
5,379,431	1/1995	Lemon et al.	395/700
5,386,551	1/1995	Chikira et al.	395/575
5,386,567	1/1995	Lien et al.	395/700
5,408,618	4/1995	Aho et al.	395/325
5,412,798	5/1995	Garney	395/500
5,420,987	5/1995	Reid et al.	395/325
5,428,748	6/1995	Davidson et al.	395/275
5,450,570	9/1995	Richek et al.	395/500
5,452,454	9/1995	Basu et al.	395/700
5,454,078	9/1995	Heimsoth et al.	395/200.1
5,459,867	10/1995	Adams et al.	395/700
5,459,869	10/1995	Spilo	395/700

(List continued on next page.)

OTHER PUBLICATIONS

"CardWare™ User Manual 1.50A," released on Oct. 8, 1993 by Award Software International, Inc., pp. 1–33.

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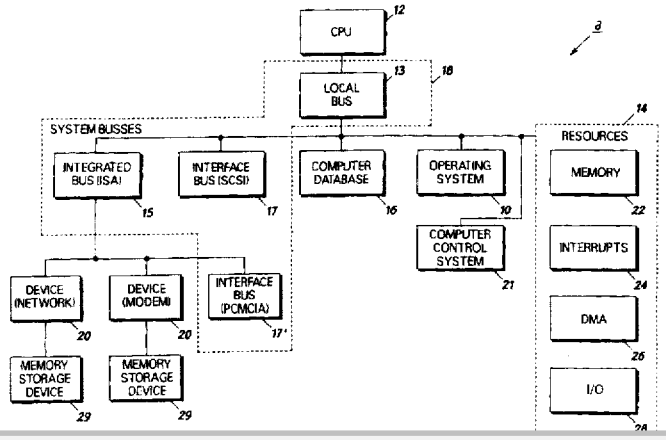
Assistant Examiner—Rehana Perveen
Attorney, Agent, or Firm—Jones & Askew, LLP

[57] **ABSTRACT**

A system for configuring devices of a computer system without user intervention. Device information for each of the devices is collected to uniquely identify the devices and to describe the device characteristics associated with the operation of devices with the computer. Computer resources, which support the functions of the devices within the computer, are allocated based upon the device information. This allocation process prevents a potential conflicting use of the resources by the devices. A device driver, which enables communications between the corresponding device and the computer system, is also identified for each of the devices in response to the device information. In response to the allocation of resources, the identified device drivers are loaded and the devices are activated for operation with the computer.

98 Claims, 11 Drawing Sheets



U.S. PATENT DOCUMENTS

5,469,545	11/1995	Vanbuskirk et al.	395/200.01
5,471,675	11/1995	Zias	395/162
5,485,460	1/1996	Schrier et al.	370/94.1
5,491,813	2/1996	Bondy et al.	395/500
5,517,636	5/1996	DeHart et al.	395/500
5,517,646	5/1996	Piccirillo et al.	395/700
5,542,055	7/1996	Amini et al.	395/281
5,553,281	9/1996	Brown et al.	395/600
5,581,261	12/1996	Hickman et al.	342/385

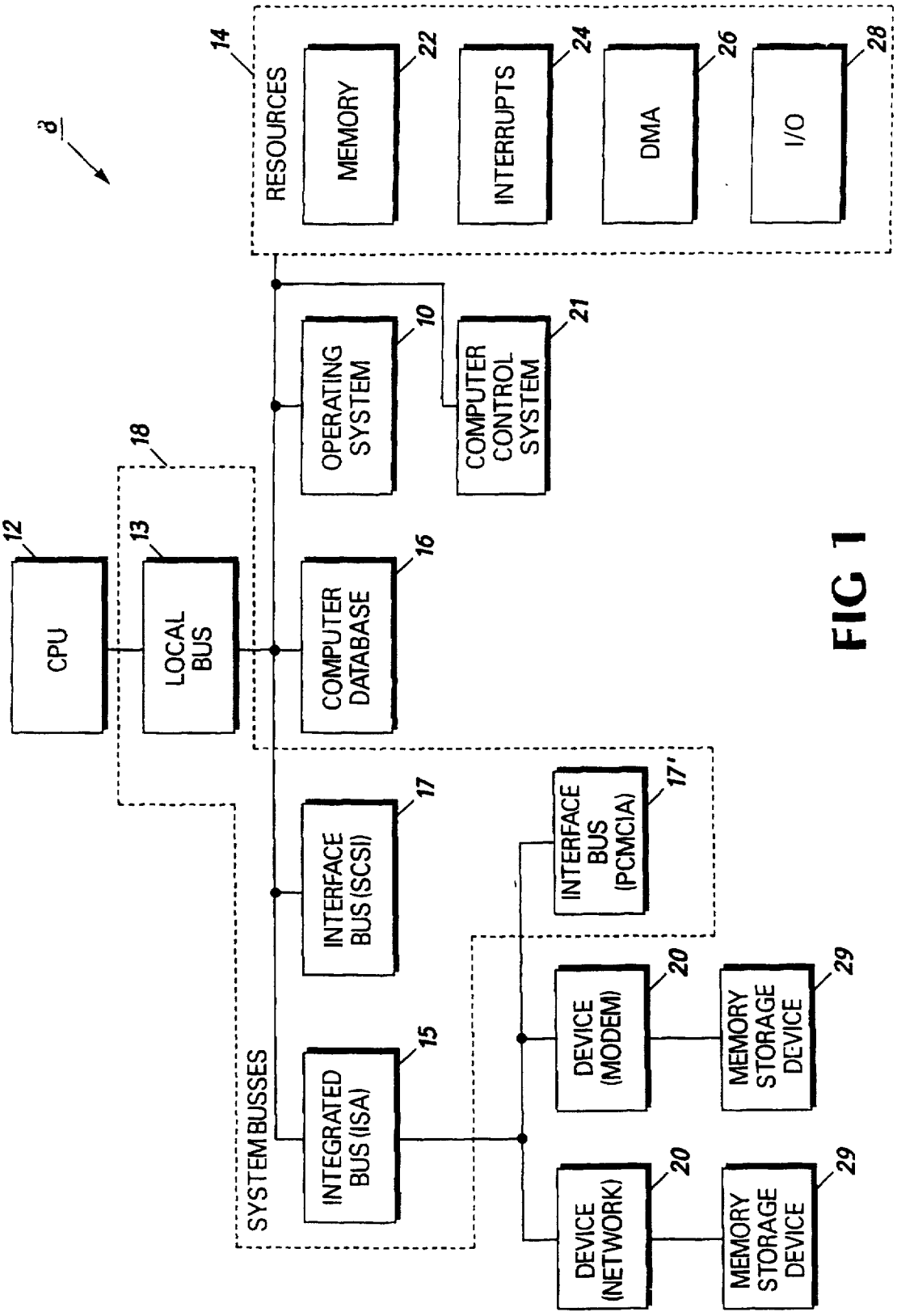


FIG 1

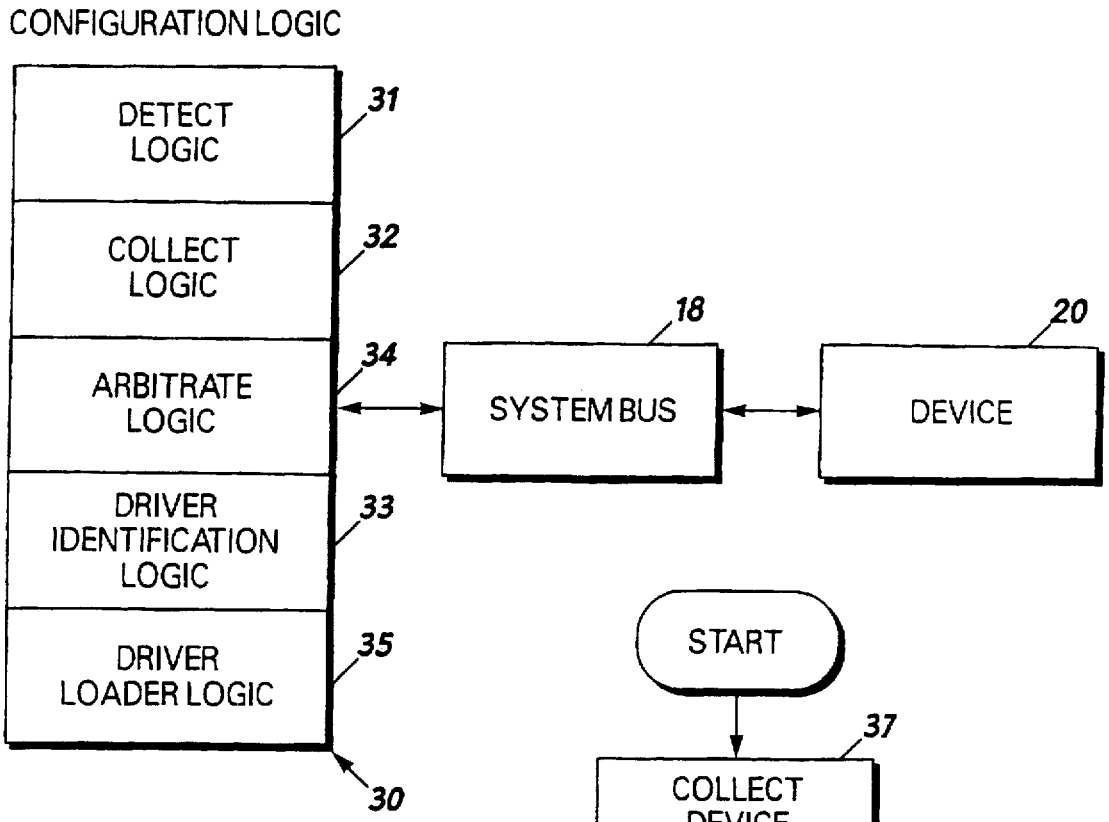


FIG 2

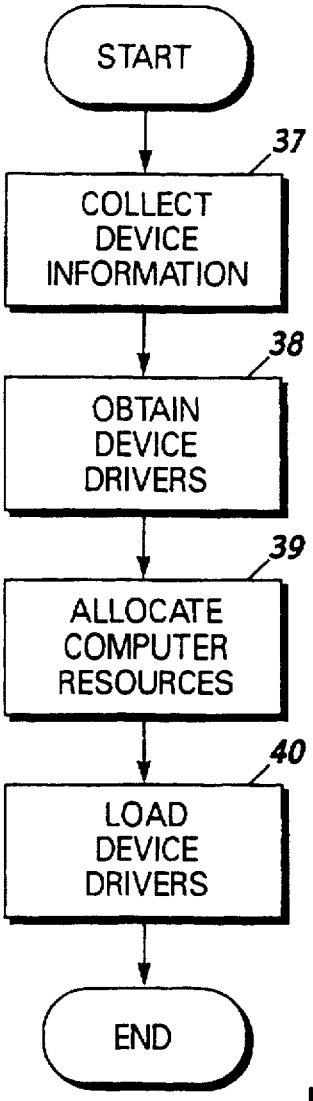


FIG 3

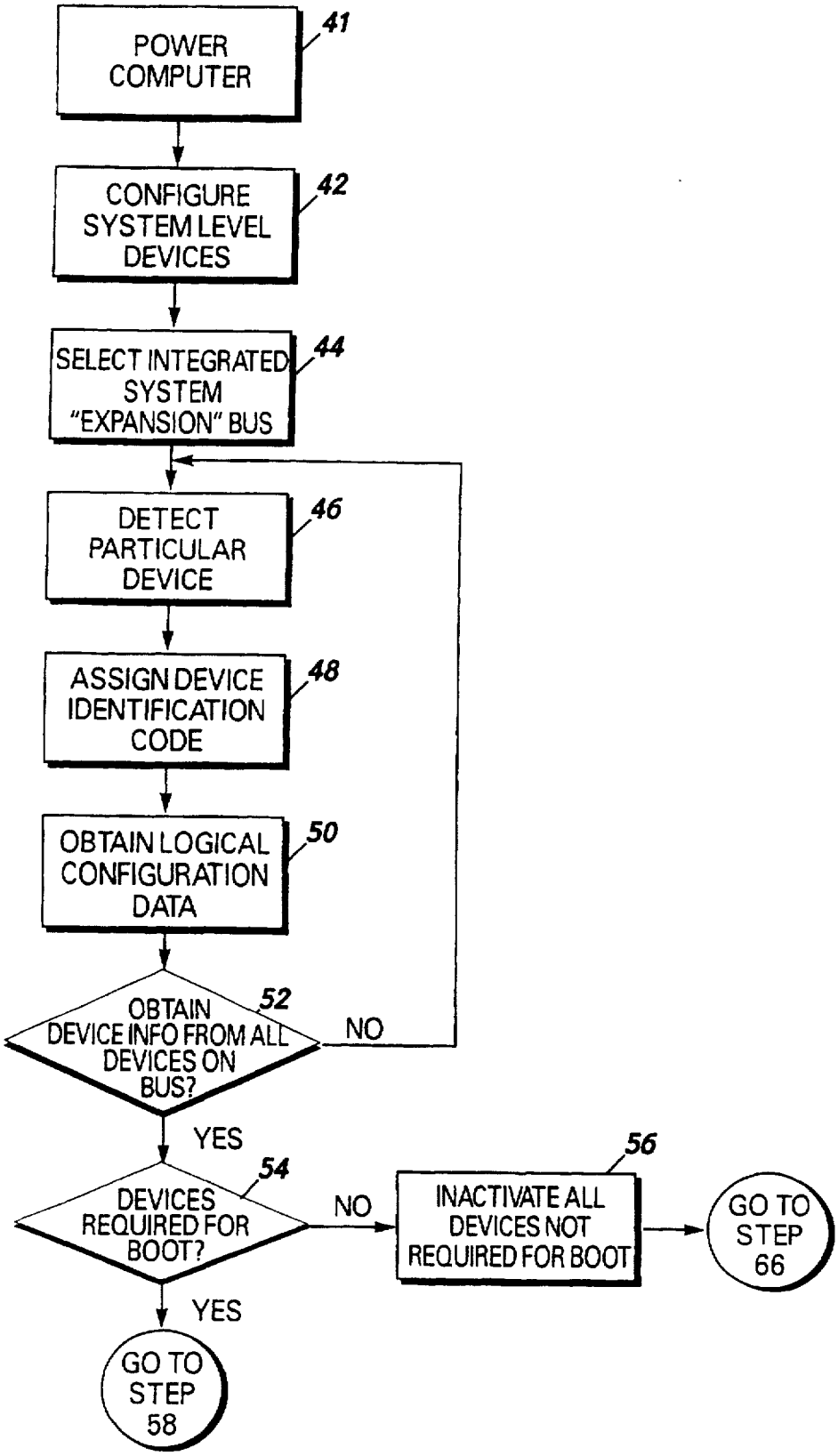


FIG 4A

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