United States Patent [19]

Caputo

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[54] **METHOD FOR AUTOMATIC INSTALLATION OF A MODEM WHEREIN UNIQUE IDENTIFICATION FOR THE DEVICE REGISTRY IS COMPUTED FROM MODEM RESPONSES TO QUERIES BY THE SYSTEM**

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Related U.S. Application Data

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[51] **Int. Cl.^{6}** **G06F 9/00**; G06F 13/10

[52] **U.S. Cl.** **395/830**; 395/421.06; 395/281; 395/828; 395/829; 395/866; 395/882; 395/884; 395/898; 364/284.2; 364/280.9; 364/947.5; 364/951.1

[58] **Field of Search** 364/238.5, 929, 364/222.2, 280.2, 284, 231; 395/828, 835, 836, 882, 883, 413, 419, 421.06, 421.07, 884, 892

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,754,217	8/1973	Bell et al.	395/284
5,038,320	8/1991	Heath et al.	395/830
5,202,899	4/1993	Walsh	375/222
5,202,963	4/1993	Zelley	395/883
5,450,530	9/1995	Snyder et al.	375/220
5,517,646	5/1996	Piccirillo et al.	395/651
5,530,887	6/1996	Harper et al.	395/800
5,530,895	6/1996	Enstrom	395/829
5,548,759	8/1996	Lipe	395/611
5,594,873	1/1997	Garrett	395/281

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, vol. 29, No.7, p. 2988 Dec. 1986.
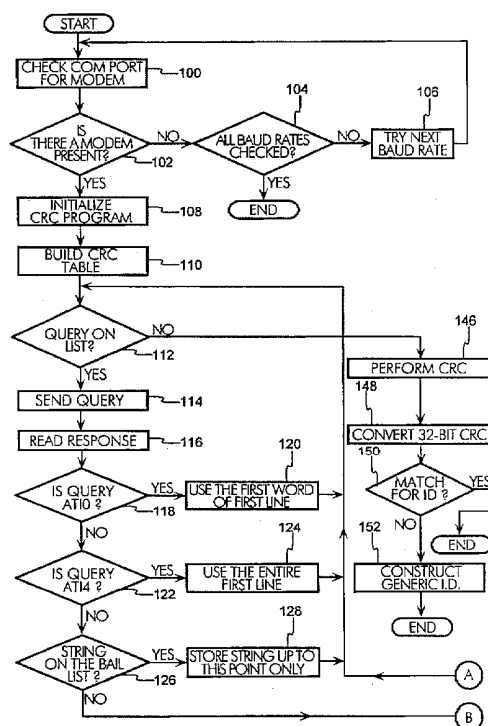
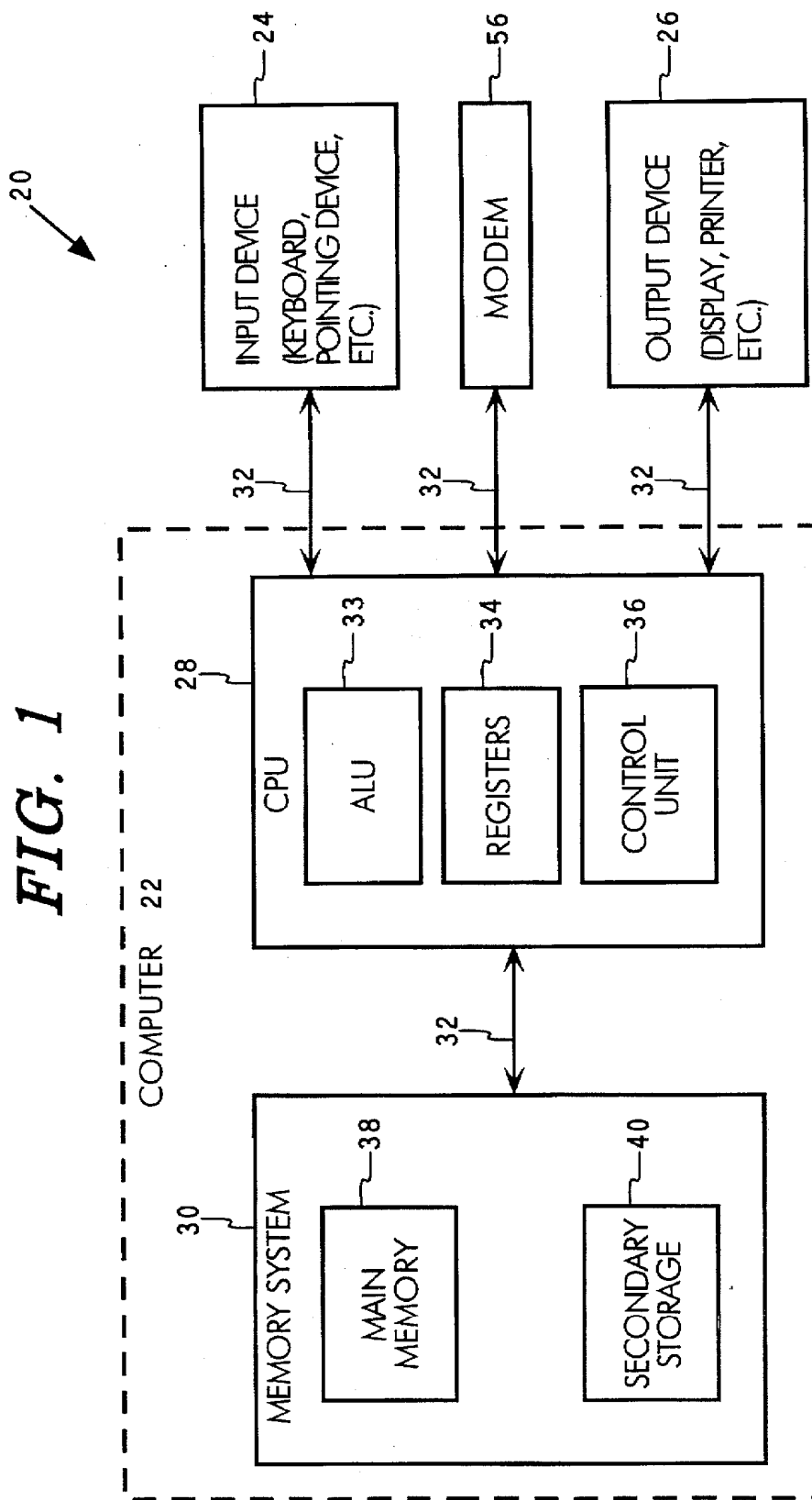*Primary Examiner*—Thomas C. Lee
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[57] **ABSTRACT**

A device independent modem interface employs a call control and data transfer application programming interface for application programs to access a modem in a device independent fashion. A universal modem driver reads device specific information from a registry to issue specific control commands to a modem. The universal modem driver separates command mode and data mode of the modem transparently to the application. The modem interface also includes support for detecting a modem and for loading device specific information into the registry based on the modem identification.
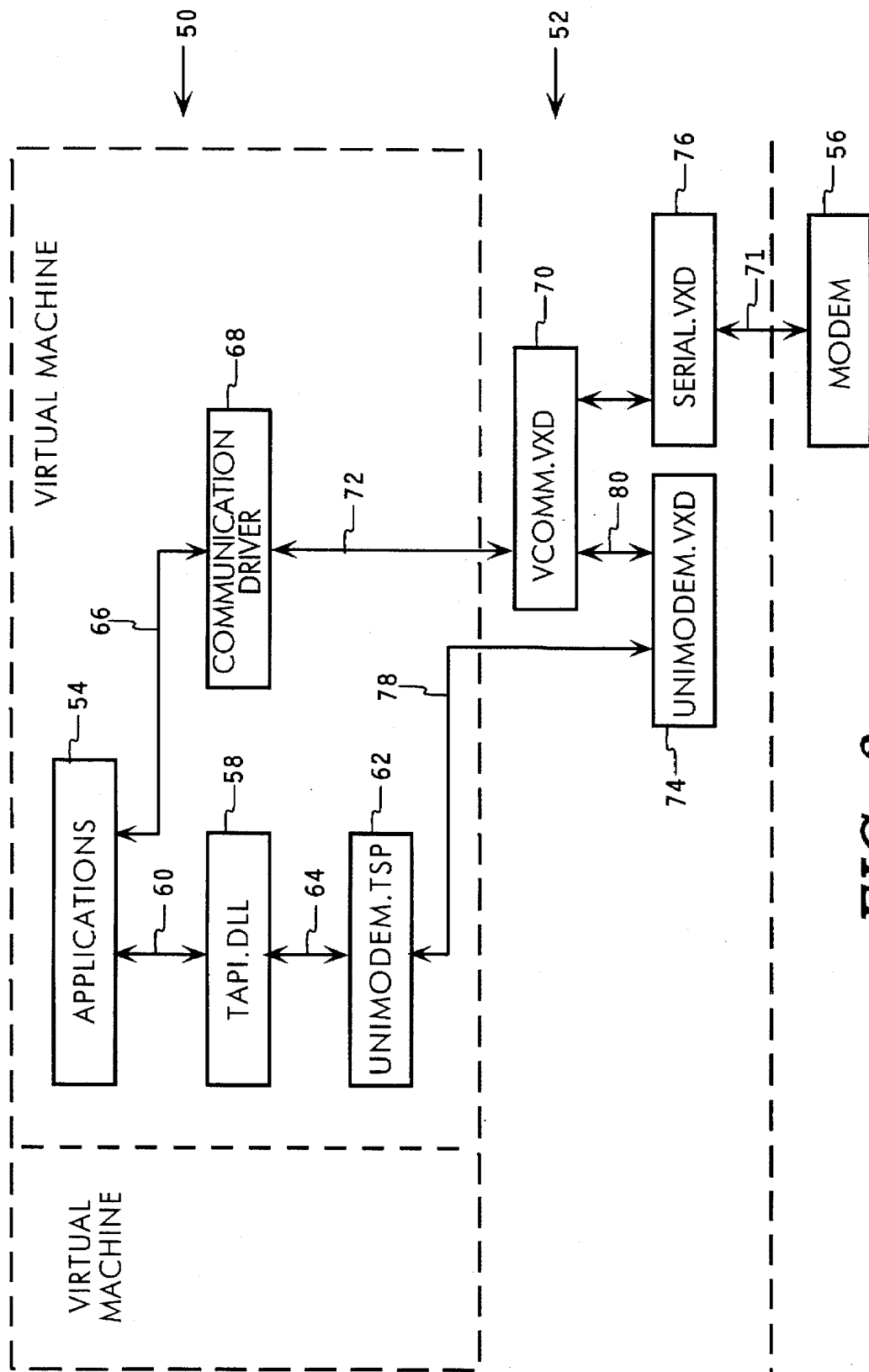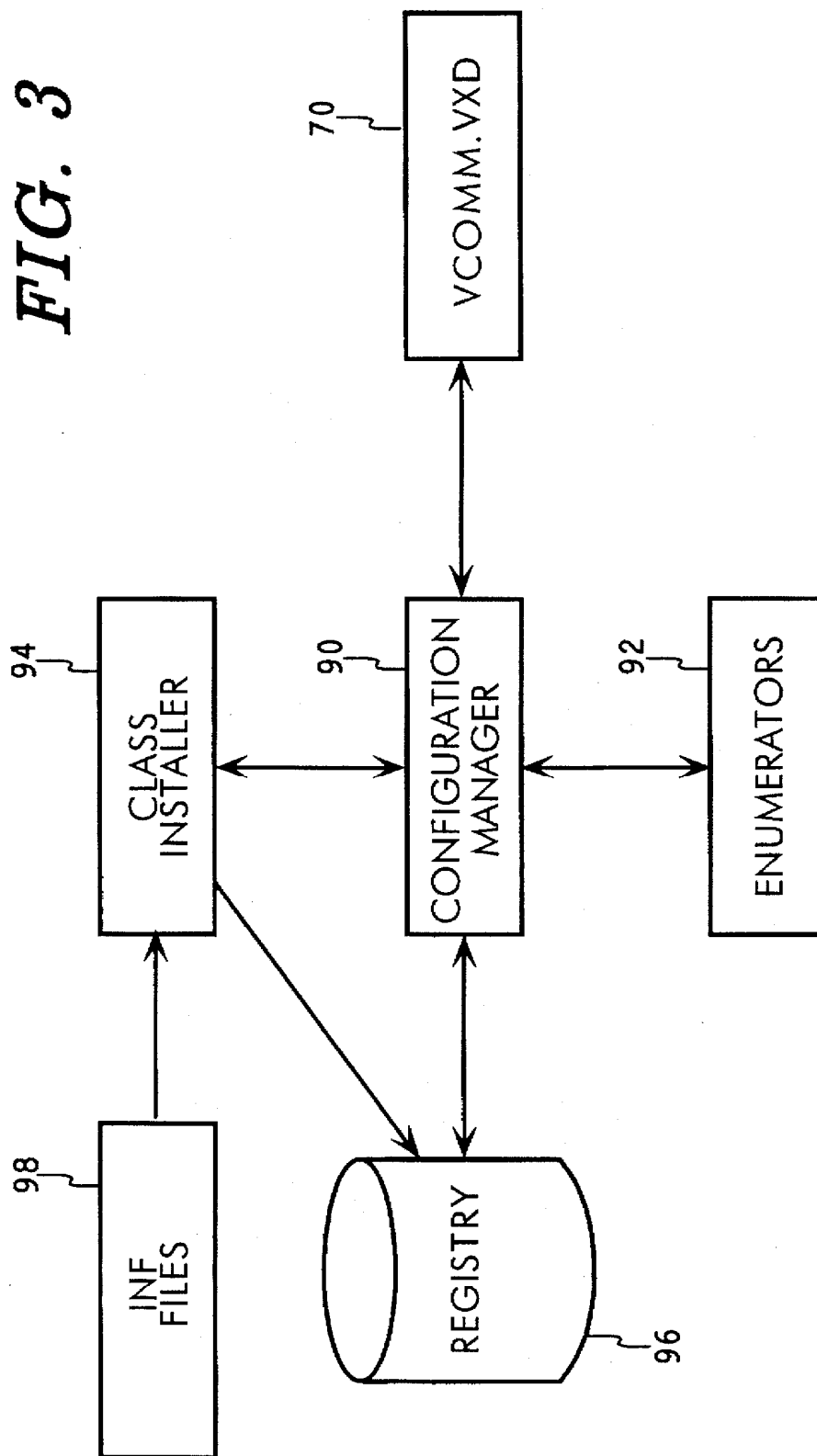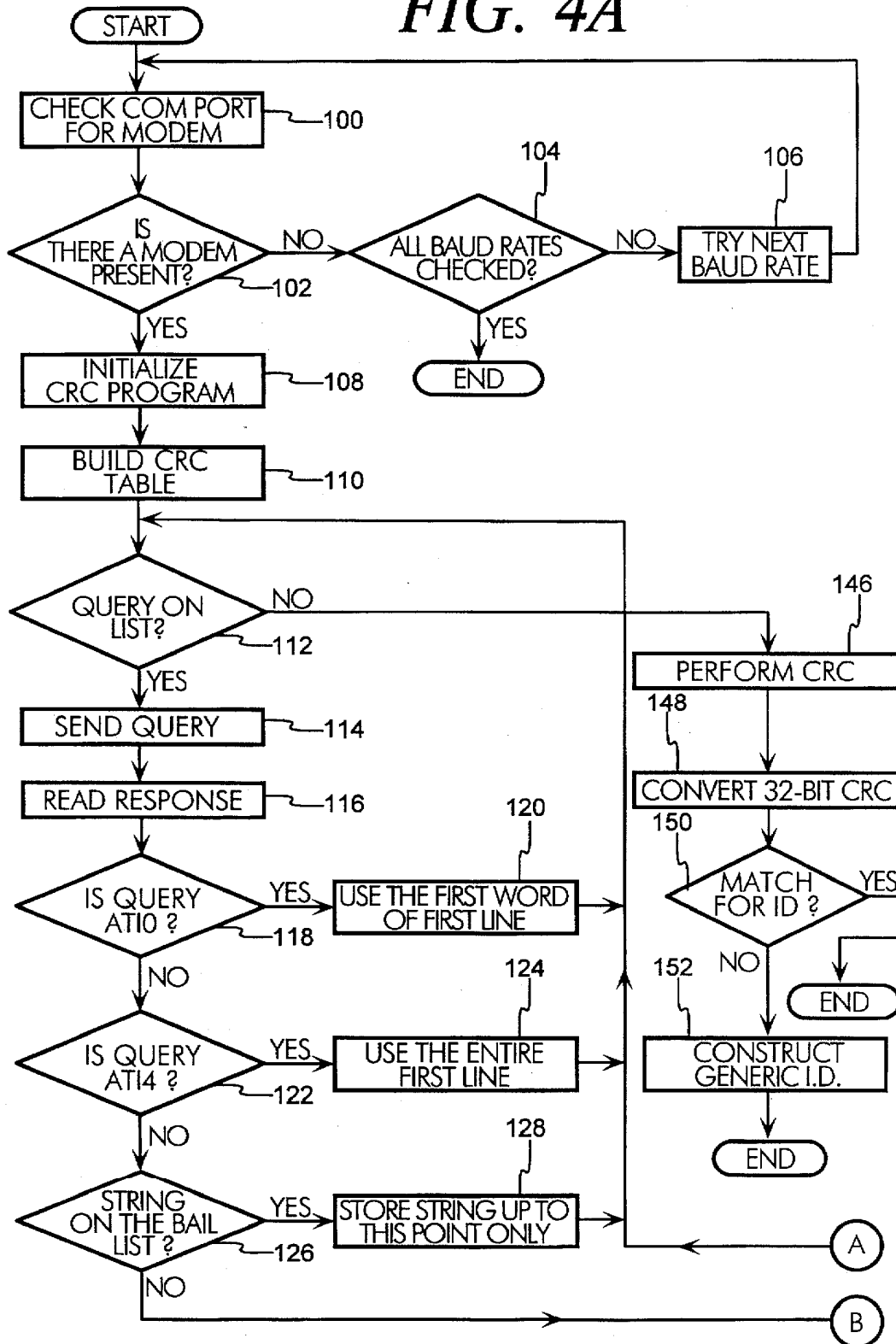
20 Claims, 5 Drawing Sheets

FIG. 1

FIG. 2

FIG. 3

FIG. 4A

START

CHECK COM PORT FOR MODEM — 100

IS THERE A MODEM PRESENT? — 102

NO → ALL BAUD RATES CHECKED? — 104

NO → TRY NEXT BAUD RATE — 106

ALL BAUD RATES CHECKED? — YES → END

IS THERE A MODEM PRESENT? — YES

INITIALIZE CRC PROGRAM — 108

BUILD CRC TABLE — 110

QUERY ON LIST? — 112

NO → PERFORM CRC — 146

QUERY ON LIST? — YES

SEND QUERY — 114

READ RESPONSE — 116

CONVERT 32-BIT CRC — 148

IS QUERY ATI0 ? — 118

YES → USE THE FIRST WORD OF FIRST LINE — 120

MATCH FOR ID ? — 150

YES → END

IS QUERY ATI0 ? — NO

IS QUERY ATI4 ? — 122

YES → USE THE ENTIRE FIRST LINE — 124

MATCH FOR ID ? — NO

CONSTRUCT GENERIC I.D. — 152

END

IS QUERY ATI4 ? — NO

STRING ON THE BAIL LIST ? — 126

YES → STORE STRING UP TO THIS POINT ONLY — 128 → A

STRING ON THE BAIL LIST ? — NO → B

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