(12) **United States Patent**
Kumar

(10) Patent No.: **US 6,640,268 B1**
(45) Date of Patent: **Oct. 28, 2003**

(54) **DYNAMIC POLLING MECHANISM FOR WIRELESS DEVICES**

(75) Inventor: **Mohan Kumar**, Beaverton, OR (US)

(73) Assignee: **Intel Corporation**, Santa Clara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/141,860**

(22) Filed: **Aug. 28, 1998**

(51) Int. Cl.^{7} **G06F 13/10**
(52) U.S. Cl. **710/46**; 710/15
(58) Field of Search 709/226, 228, 709/225, 238; 710/241, 46–49, 15–19; 463/27; 455/67

(56) **References Cited**

U.S. PATENT DOCUMENTS

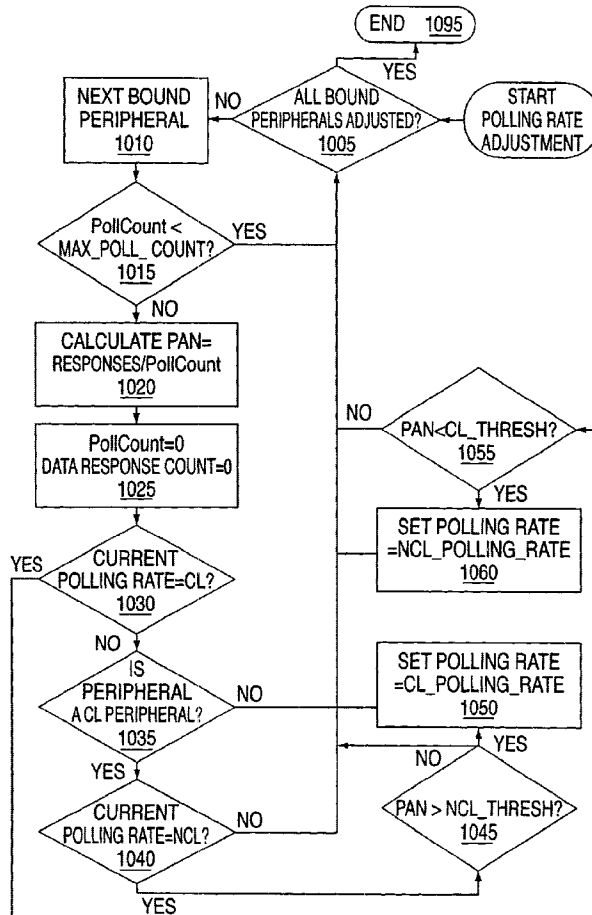|				
4,598,363 A	*	7/1986	Clark et al.	710/46
4,638,428 A	*	1/1987	Gemma et al.	710/241
5,070,536 A	*	12/1991	Mahany et al.	455/67.14
5,249,269 A	*	9/1993	Nakao et al.	709/225
5,483,676 A	*	1/1996	Mahany et al.	455/67.14
5,555,414 A	*	9/1996	Hough et al.	710/261
5,659,787 A	*	8/1997	Schieltz	709/226
5,766,076 A	*	6/1998	Pease et al.	463/27
5,768,148 A	*	6/1998	Murphy et al.	364/528.21
5,787,256 A	*	7/1998	Marik et al.	709/238
5,896,561 A	*	4/1999	Schrader et al.	455/67.1
6,195,712 B1	*	2/2001	Pawlowski et al.	710/19
6,449,663 B1	*	9/2002	Carney et al.	710/15

* cited by examiner

Primary Examiner—Christopher B. Shin
(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(57) **ABSTRACT**

In a system in which a polling devices polls one or more devices, a method and apparatus are described that allows the polling device to adjust the polling rate of all polled devices with which it is communicating based upon the activity level of each polled device. This dynamic polling scheme permits a much more efficient allocation of bandwidth than is available with static or fixed polling schemes.

52 Claims, 13 Drawing Sheets

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PROCESSOR 106

SYSTEM BUS 108

BRIDGE CIRCUIT 110

MEMORY 109

SECONDARY BUS 70

HOST CONTROLLER 101

I/O INTERFACE 116

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ENCODER/DECODER 120

HOST COMPUTER SYSTEM 100

TRANSCEIVER 122

COMMUNICATION CHANNEL 104

TRANSCEIVER 128

WIRELESS PERIPHERAL DEVICE 102

ENCODER/DECODER 126

PERIPHERAL CONTROLLER 130

FIG. 1

DEVICE CONTROLLER ARCHITECTURE

PROCESSOR   201

SYSTEM BUS   205

BRIDGE CIRCUIT   202

MEMORY   203

SECONDARY BUS   204

PERIPHERAL DEVICE CONTROLLER 130

FIG. 2

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HOST 100

PERIPHERAL 102

PERIPHERAL 102
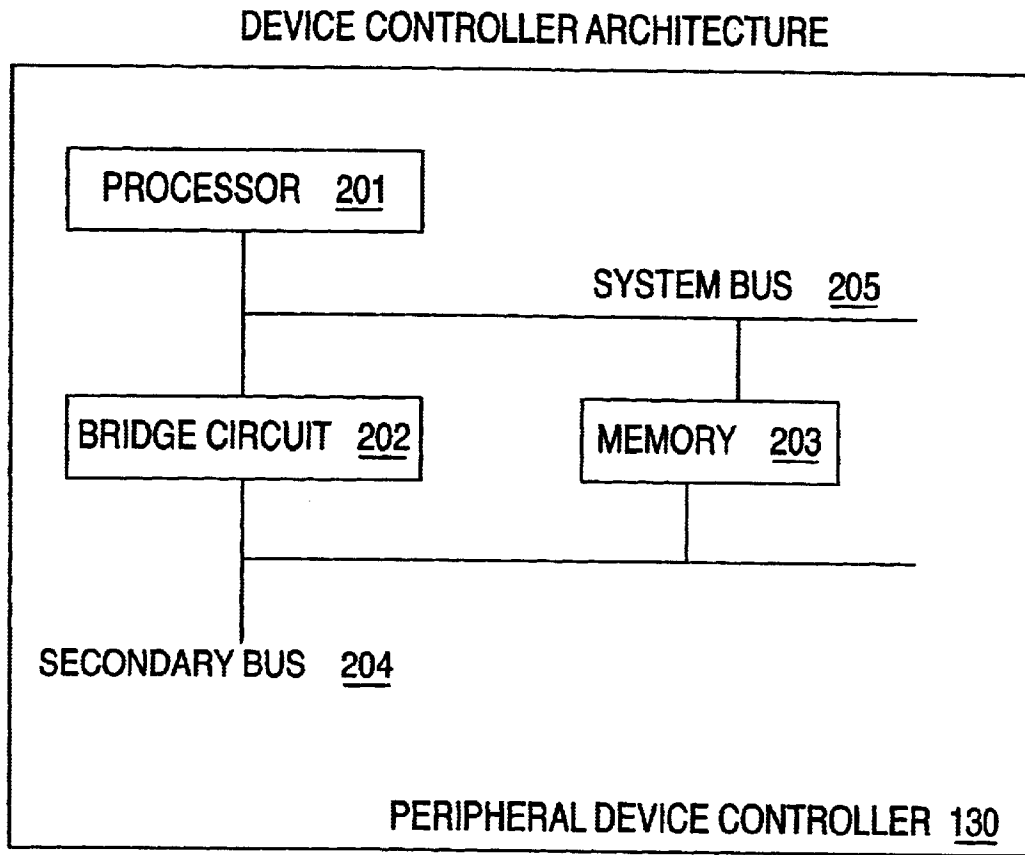
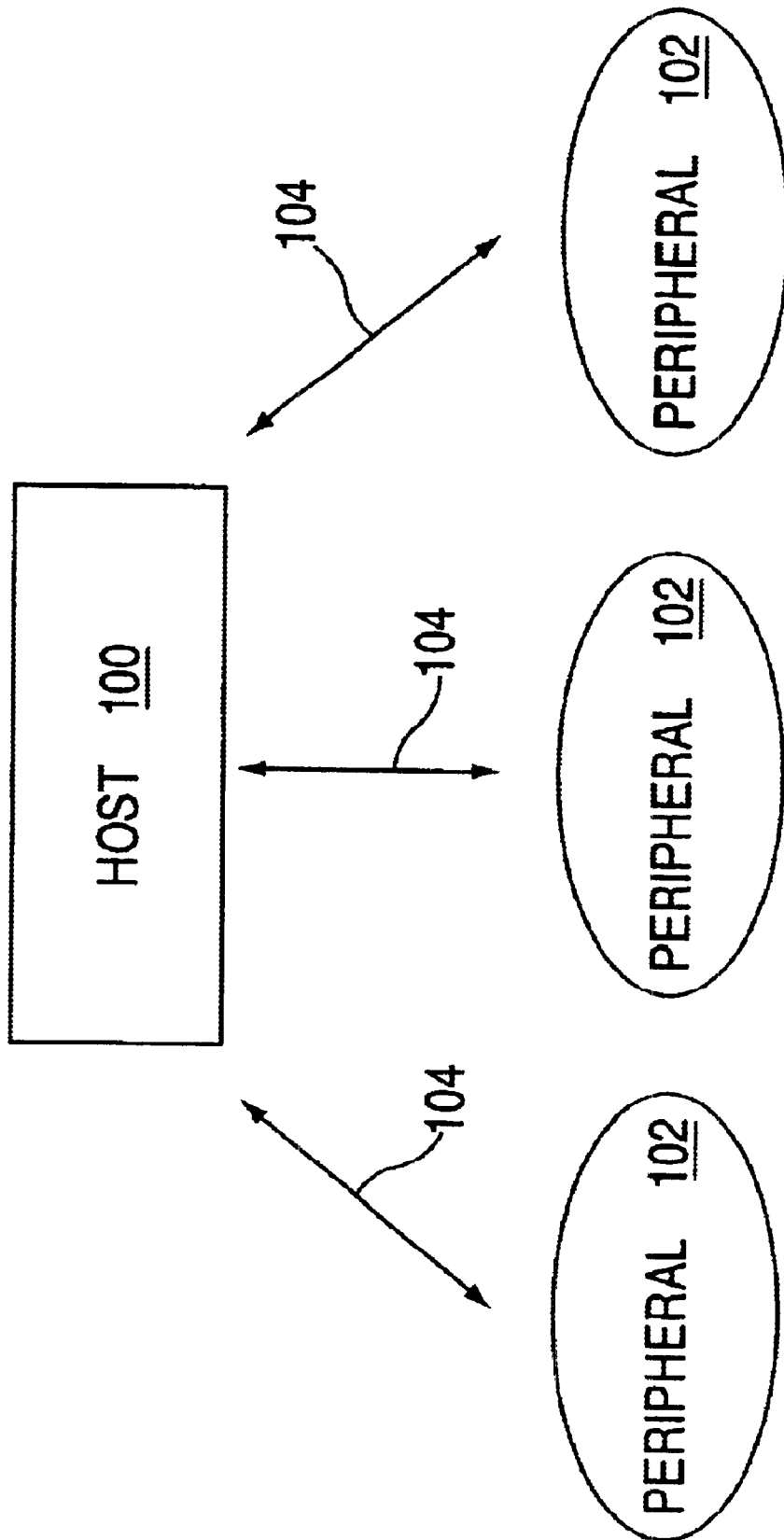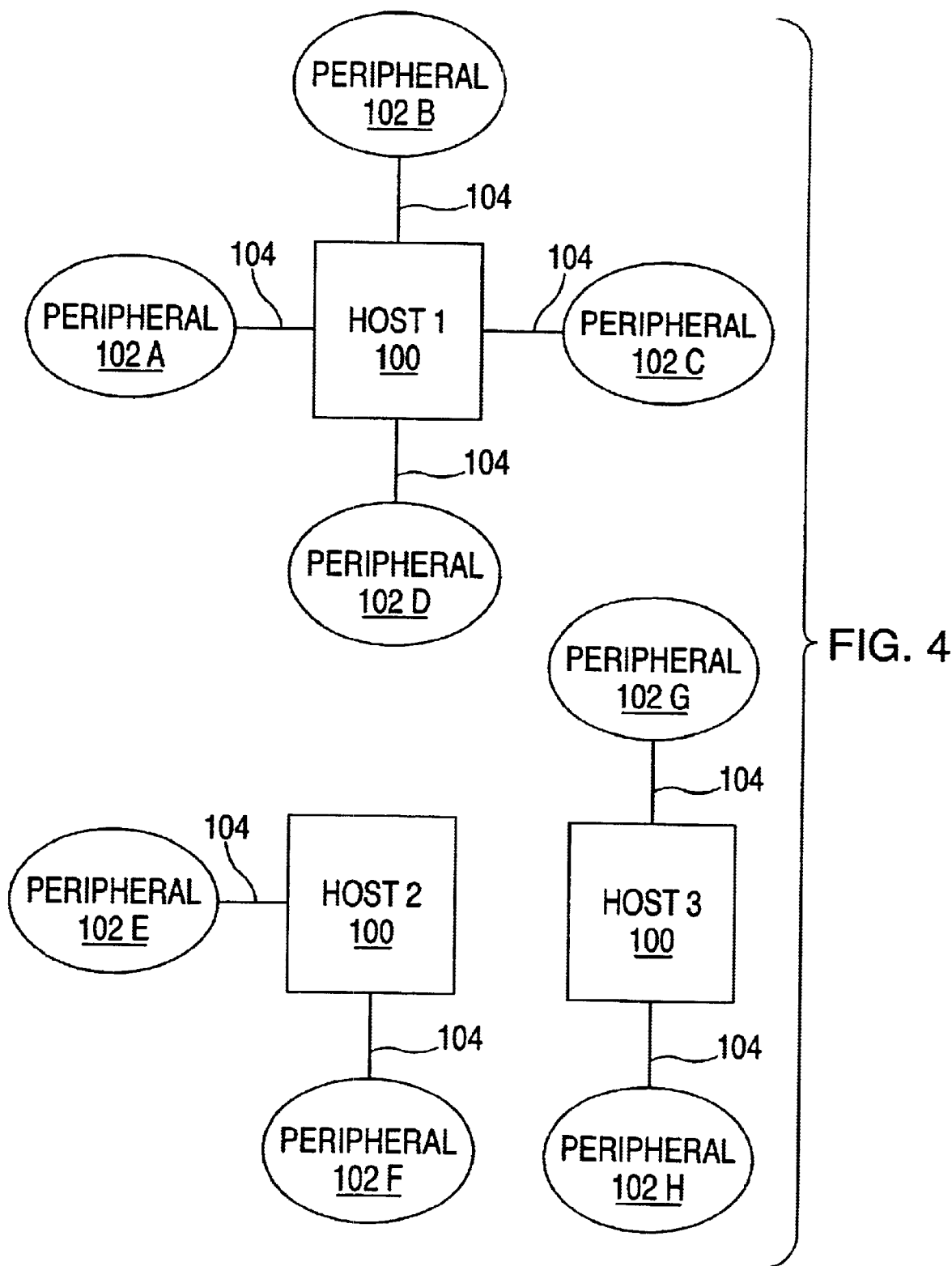PERIPHERAL 102

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FIG. 3

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FIG. 4

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