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van Oostrom et al.

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[54] **PATIENT DATA ACQUISITION AND CONTROL SYSTEM**[75] Inventors: **Johannes H. van Oostrom; Richard J. Melker**, both of Gainesville, Fla.[73] Assignee: **University of Florida**, Gainesville, Fla.[21] Appl. No.: **09/179,768**[22] Filed: **Oct. 27, 1998**[51] Int. Cl.⁷ **A61B 5/00**[52] U.S. Cl. **600/300**; 128/904; 128/920[58] **Field of Search** 600/300, 301, 600/341; 128/903, 904, 920; 604/226, 265, 403; 210/782; 428/411.1, 500; 395/200.3; 702/19, 85, 105[56] **References Cited**

U.S. PATENT DOCUMENTS

4,838,275	6/1989	Lee	.....	128/670
5,060,140	10/1991	Brown et al.	.....	364/200
5,400,246	3/1995	Wilson et al.	.....	364/146
5,467,773	11/1995	Berglson et al.	.....	128/709
5,509,121	4/1996	Nakata et al.	.....	395/200.1
5,535,375	7/1996	Eshel et al.	.....	391/500
5,544,649	8/1996	David et al.	.....	128/630

5,553,609	9/1996	Chen et al.	.....	128/630
5,558,638	9/1996	Evers et al.	.....	604/66
5,586,305	12/1996	Eidson et al.	.....	395/500
5,590,648	1/1997	Mitchell et al.	.....	128/630
5,632,022	5/1997	Warren et al.	.....	395/350
5,694,546	12/1997	Reisman	.....	395/200.9
5,748,612	5/1998	Stoevhase et al.	.....	370/230
5,776,057	7/1998	Swenson et al.	.....	600/301
5,974,237	10/1999	Shurmer et al.	.....	395/200.54

Primary Examiner—Eric F. Winakur*Assistant Examiner*—Charles Marmor, II*Attorney, Agent, or Firm*—Saliwanchik, Lloyd & Saliwanchik

[57]

ABSTRACT

The present invention solves this communication problem by providing a method and apparatus for connecting to and coordinating data communications of various medical devices having different communication protocols. In a preferred embodiment, the invention provides a way to recognize common parameters and separate out only that part of the communication that is different between and specific to the various monitors and therapeutic devices. The invention efficiently utilizes defined common parameters for protocol types and selectively configures the specific settings when required, automatically.

38 Claims, 15 Drawing Sheets