

United States Patent [19]

Stein

[54] SYSTEM AND METHOD FOR PROVIDING MODULAR CONTROL AND FOR MANAGING ENERGY CONSUMPTION

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- [73] Assignee: Intellinet, Inc., Naples, Fla.
- [*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).
- [21] Appl. No.: 08/749,341
- [22] Filed: Nov. 21, 1996
- [51] Int. Cl.⁷ G05B 11/01

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,965,742	10/1990	Skeirik 364/513
5,086,385	2/1992	Launey et al 364/188
5,400,246	3/1995	Wilson et al 364/146
5,463,735	10/1995	Pascucci et al 395/200.52
5,510,975	4/1996	Ziegler, Jr 364/148
5,570,085	10/1996	Bertsch 364/146
5,572,438	11/1996	Ehlers et al 364/492
5,598,566	1/1997	Pascucci et al 395/750.06
5,621,662	4/1997	Humphries et al 364/138
5,640,153	6/1997	Hildebrand et al 340/825.06
5,642,101	6/1997	Stirk et al 340/825.08

5,684,710	11/1997	Ehlers et al	
5,696,695	12/1997	Ehlers et al	

6,029,092

*Feb. 22, 2000

OTHER PUBLICATIONS

International Search Report dated Sep. 1, 1998.

Patent Number:

Date of Patent:

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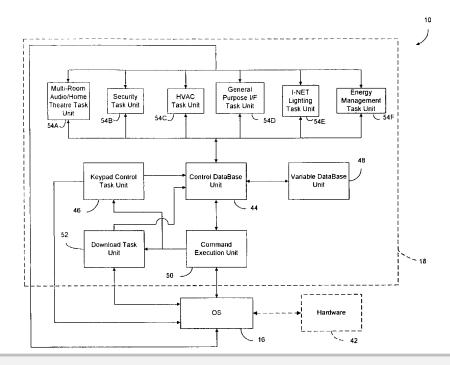
Primary Examiner-Paul P. Gordon

Attorney, Agent, or Firm-George T. Marcou; Kilpatrick Stockton LLP

[57] ABSTRACT

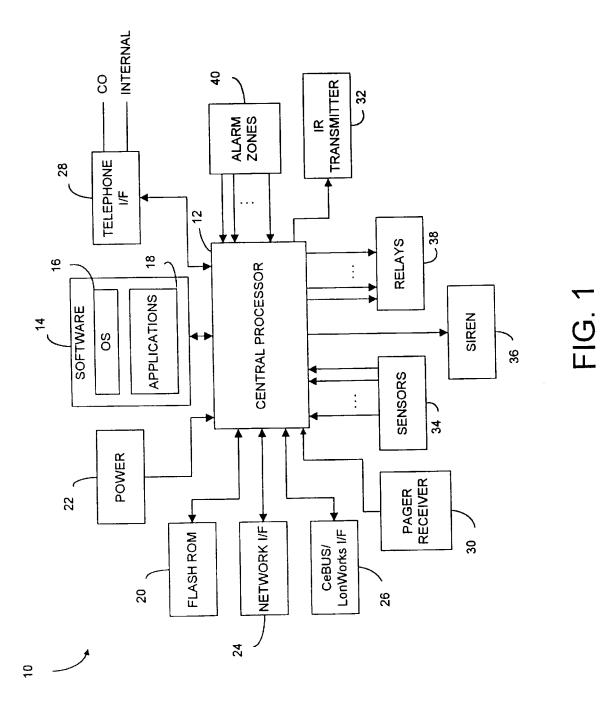
A control system is extremely flexible and modular and can be equipped or upgraded to have any number or combination of features, such as security, home theater/audio, HVAC, energy management, and lighting with each feature having a separate task unit. The task units can be added or removed from a core set of units within minimal impact on the core set of units. The core set of units includes a control database unit that stores sets of commands in a relational database according to an input/output event and a command execution unit that routes the commands to the appropriate task units for execution. The core set of units do not need to understand the input/output event or the commands but rather routes the commands to the task units addressed for execution. The system has a variable database that contains a relational database of variables shared between the various task units and stores such things as all keypad displays. The individual task units query the variable database unit for values of all shared variables and automatically receive any updates in values of the shared variables from the variable database unit. The software for the system is stored in flash ROM and can be automatically upgraded through a download task unit. The system may have an energy task unit that adjusts consumption of electricity based on any changes in rate and which provides a pathway of communication with the electrical utility company.

55 Claims, 16 Drawing Sheets

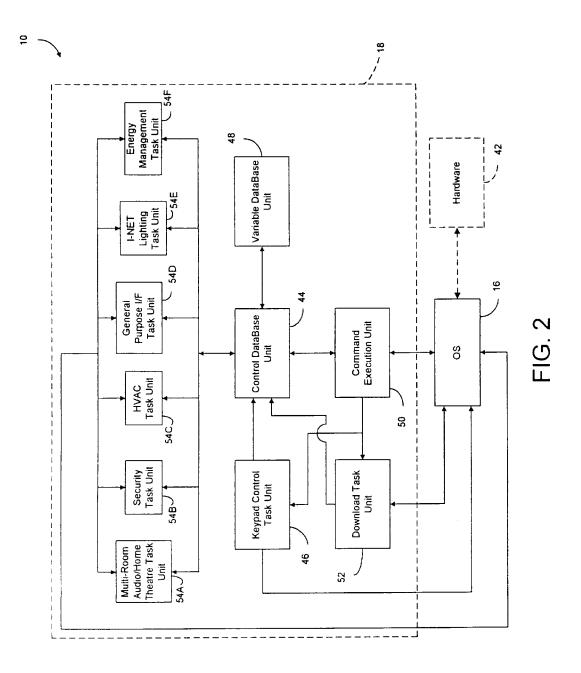


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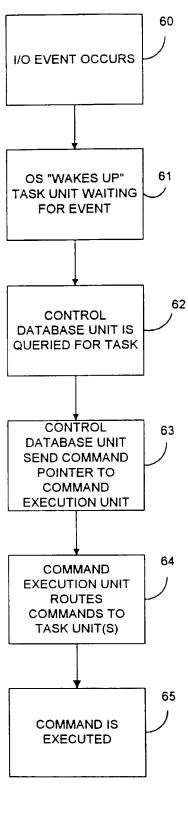
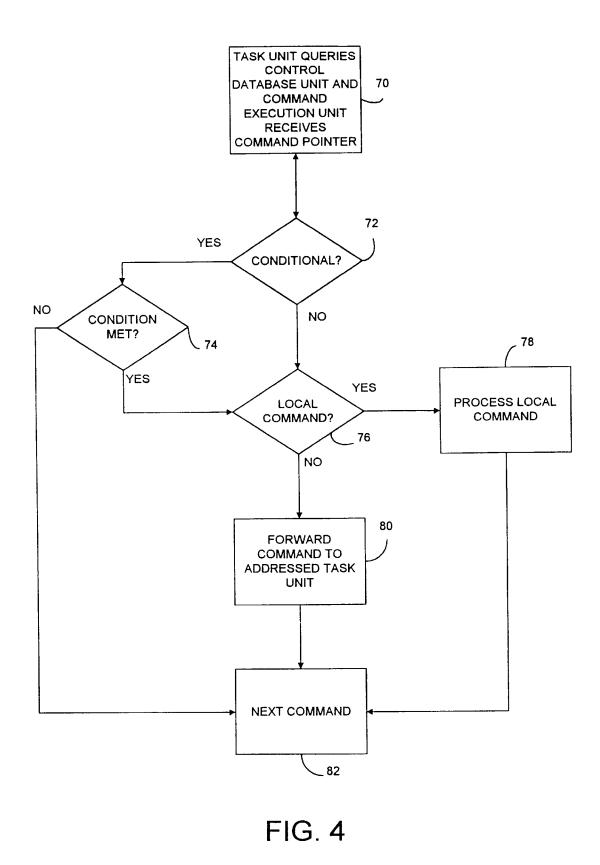


FIG. 3

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