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Ehlers et al.

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[54] SYSTEM FOR RATE-RELATED CONTROL OF ELECTRICAL LOADS

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307/115; 307/126

[58] Field of Search 364/492, 493,
364/464.04, 132, 138, 139, 483; 307/38,
49, 41, 115, 116, 126, 132 E

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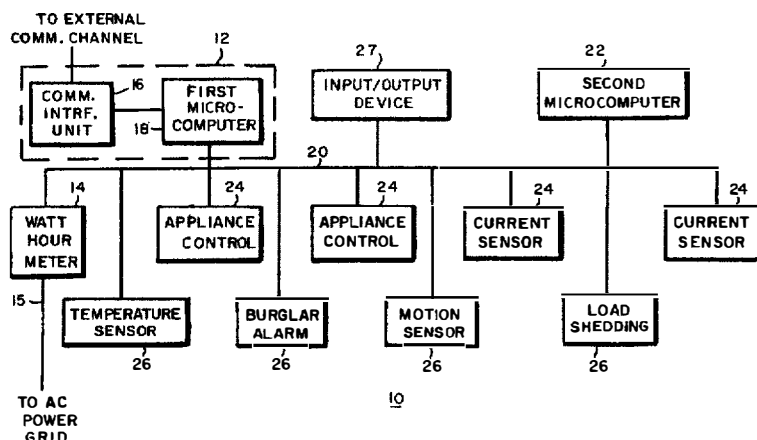
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[57] ABSTRACT

An energy management and building automation system including a local area network or home automation data bus such as the CEBus. Each load to be controlled is connected to the bus via a control module. A control module may contain a relay or switch (hereafter referred to as a "breaker" or "circuit breaker") to disconnect the load from the mains upon command or upon occurrence of a power outage, or in either case. Current monitoring control modules determine whether connected loads are drawing current and power monitor modules monitor the power consumed by selected loads (from which energy consumption may be calculated). Both types of monitors may place on the bus messages to indicate load status or changes in load status. A first microcomputer preferably is placed externally to the customer premises, adjacent (or even within the housing of) the electric utility power meter. A second microcomputer preferably is placed inside the customer premises. The two microcomputers communicate with each other and with the various load control modules via the network/data bus.

11 Claims, 43 Drawing Sheets



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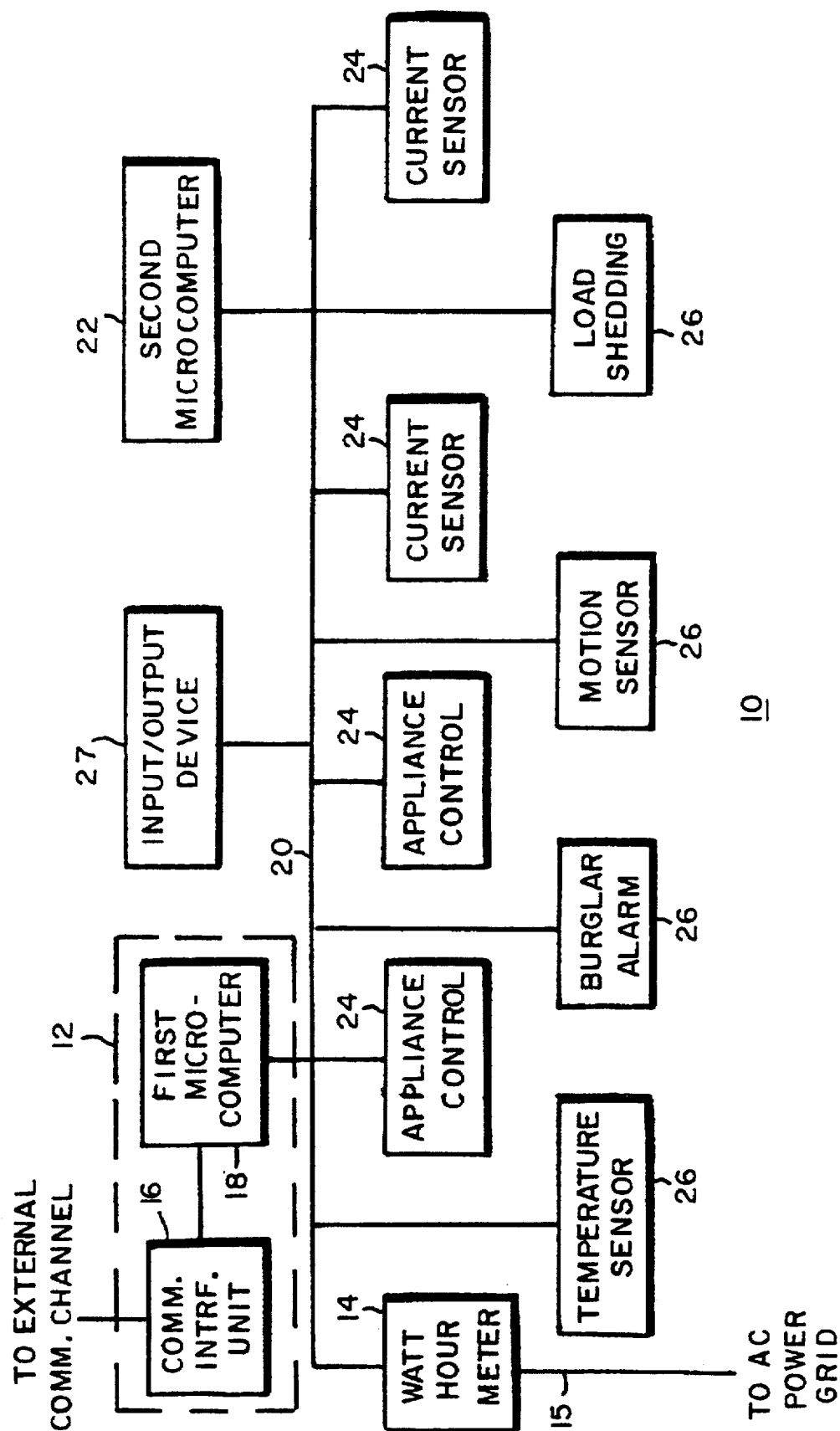


FIG. 1

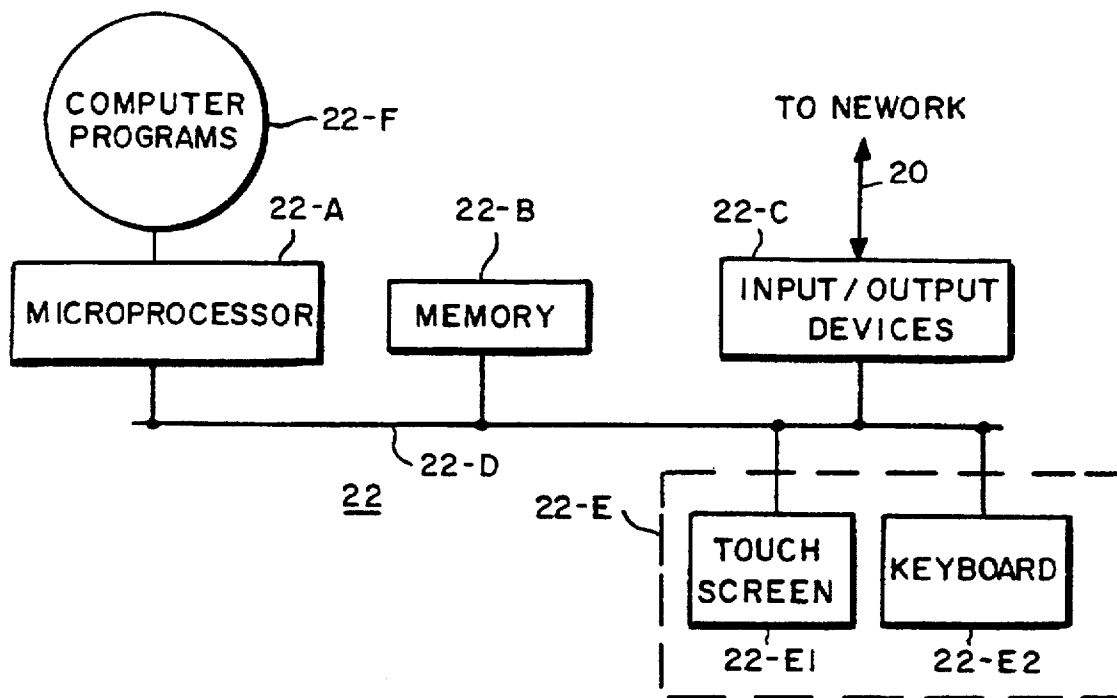
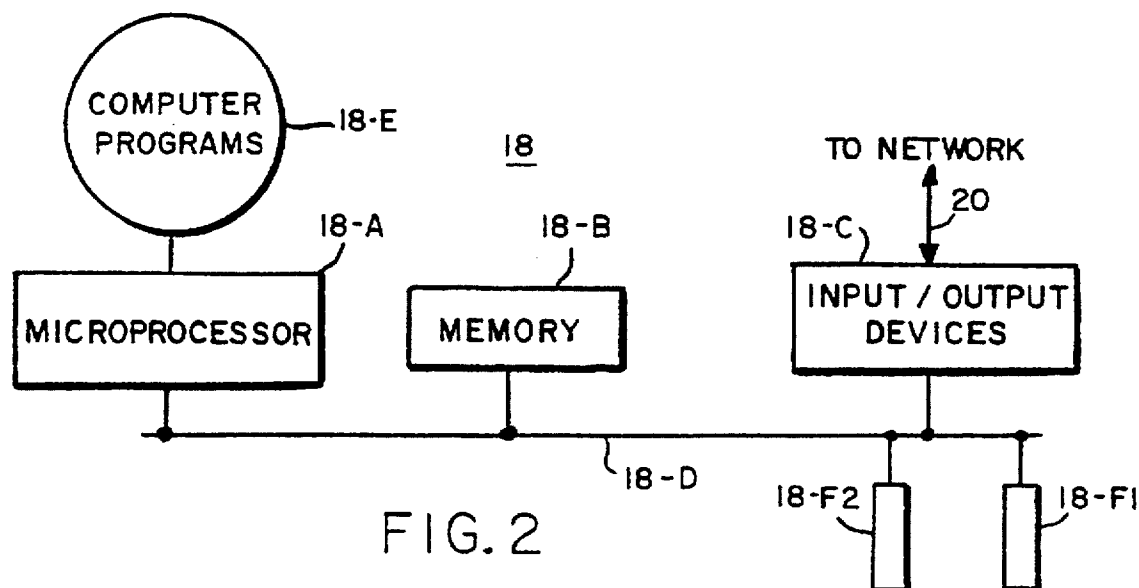


FIG. 3



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