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(54) **HOUSEHOLD ENERGY MANAGEMENT SYSTEM**

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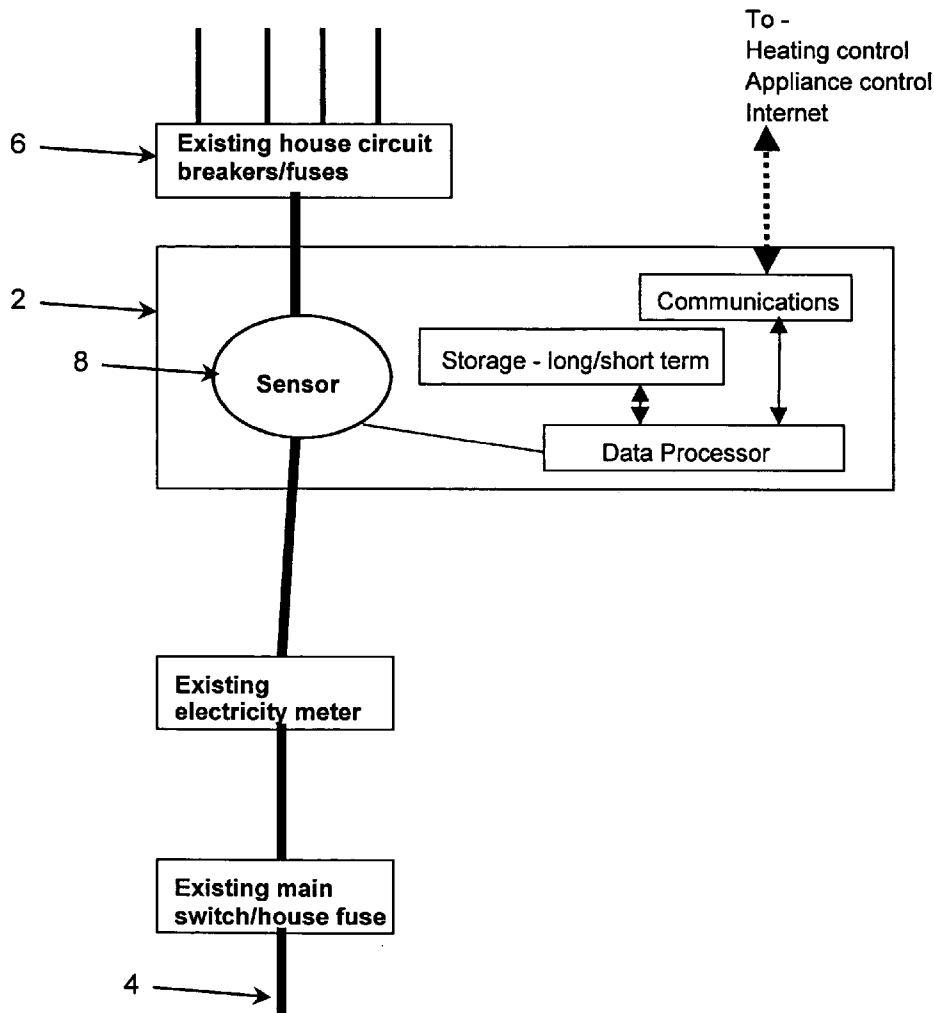
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(57) **ABSTRACT**

A household energy management system uses measurements of the household electricity supply 4 to identify and to determine the energy consumption of individual household appliances. From these measurements, models can be built of the behaviour of the occupants of the house, the thermal properties of the house and the efficiency of the appliances. Using the models, the household appliances—in particular heating and cooling appliances—can be controlled to optimize energy efficiency; and maintenance programmes for the appliances and for the house itself can be recommended to the householder or arranged with a service company.



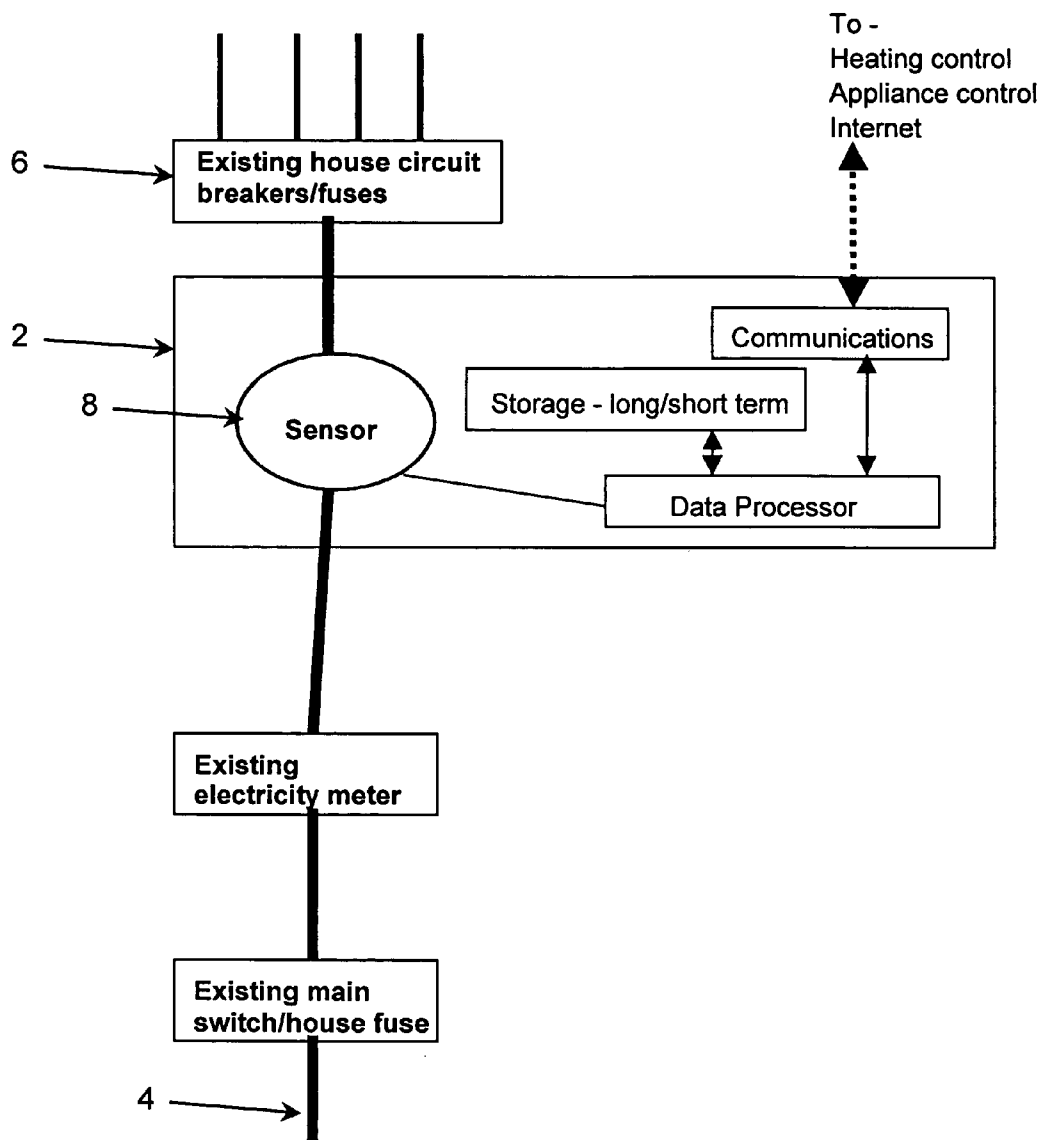


Figure 1

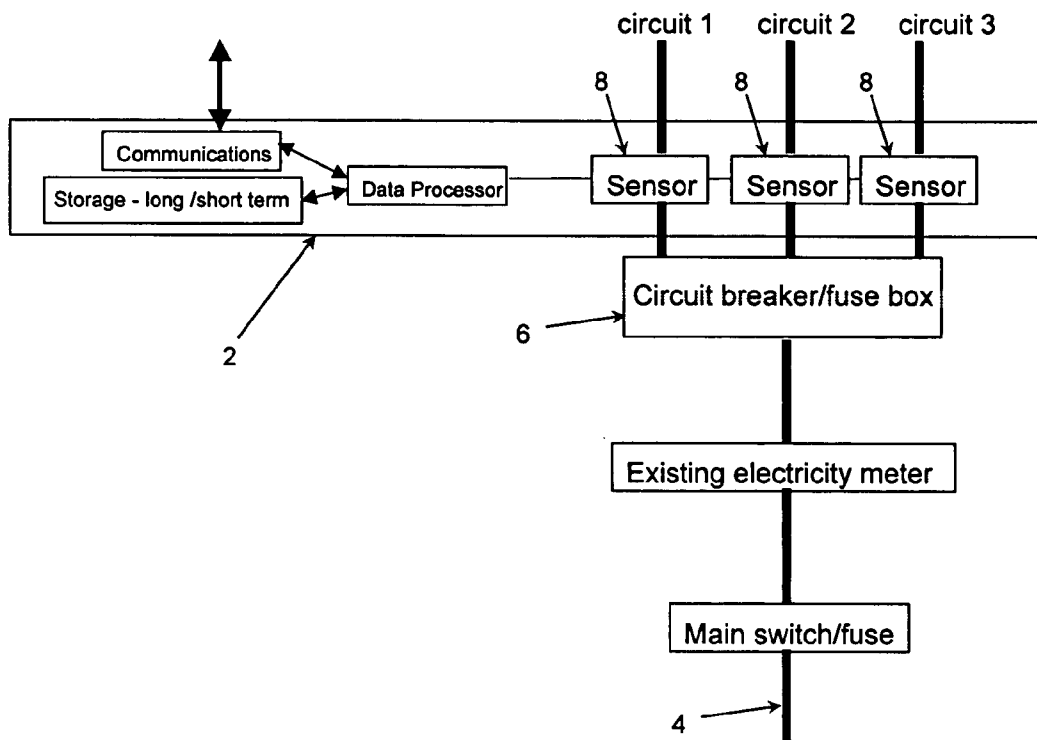


Figure 2

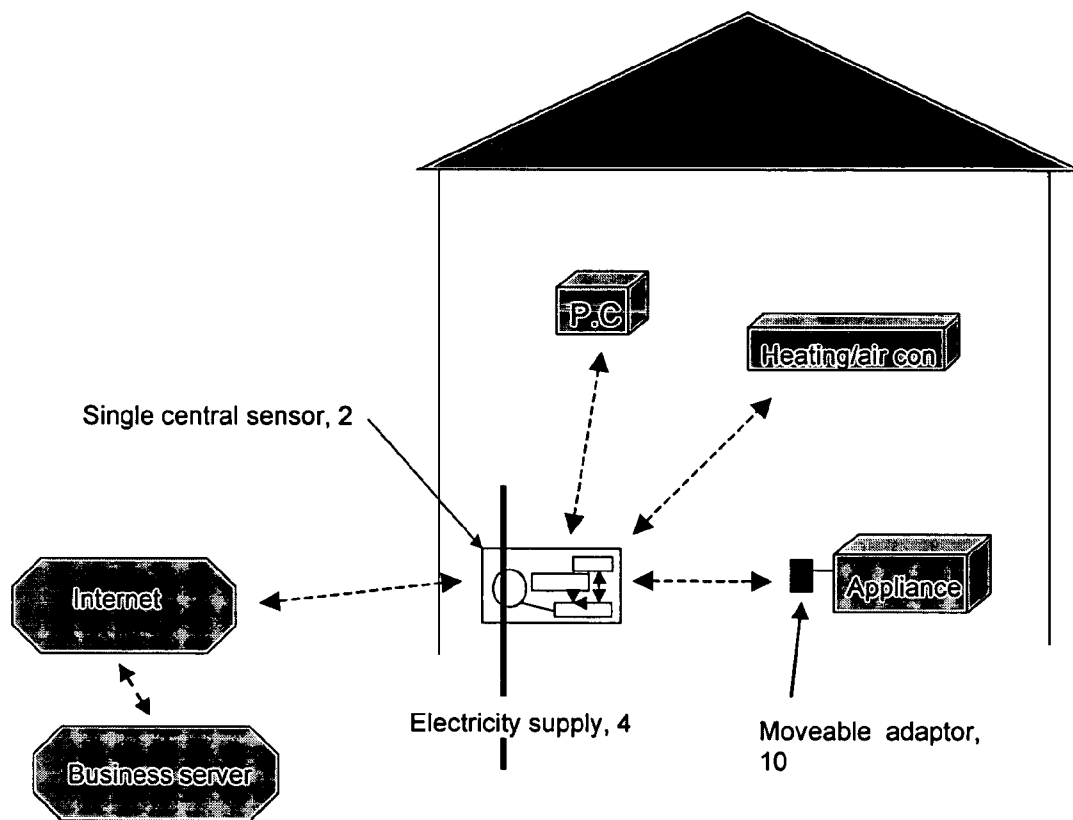
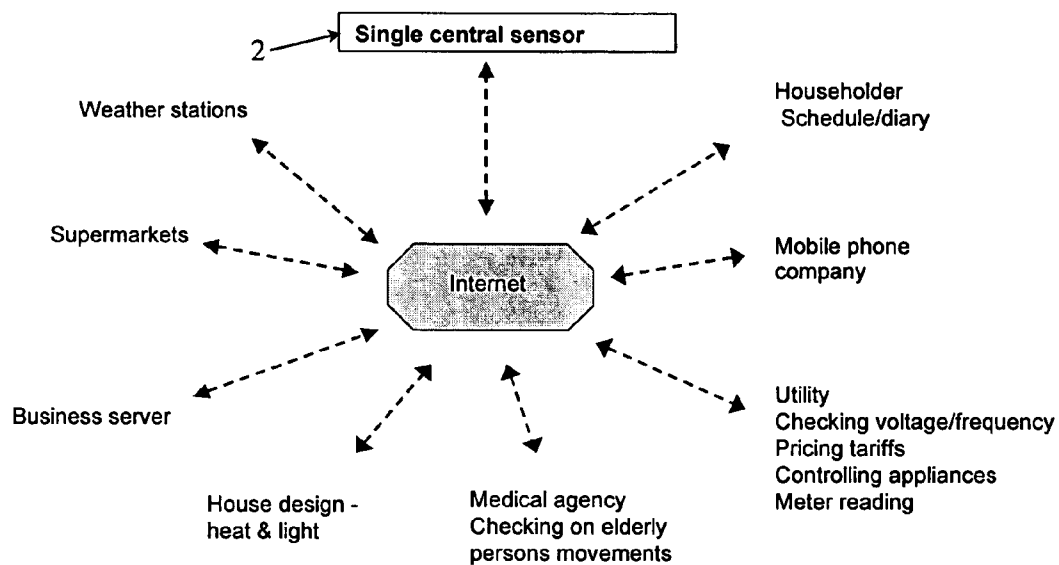


Figure 3



**Figure 4**

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