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(54) Title: METHOD AND DEVICE FOR MEASURING AND MONITORING

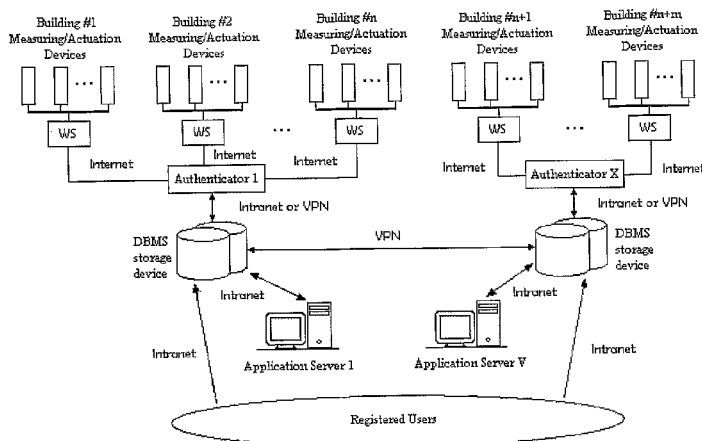


Figure 1

(57) Abstract: A method and device for remotely measuring, monitoring and controlling physical quantities over digital communication networks is provided. The measured quantities are grouped by energy end-uses or type of energy produced. The present patent describes the hardware and software used to perform these measurements, monitoring and control actions. The method and associated devices provide the means to sub-divide the building energy consumption by its end-uses or into cost centers, so as to determine the 'specific energy consumption' of each cost center, in terms of kWh/produced unit, kWh/m², kWh/employee, for example. The system comprises four hierarchically interconnected layers. The first layer includes all the equipments and technologies involved in data acquisition (or actuation) in the monitored building. The second layer contains the equipments and the software for grouping the measurements gathered at each sampling instant by their end-use consumption or type of energy produced, which are responsible for storing the acquired data and sending them to a remote database server, via the Internet. The third layer is responsible for the authentication of each connection to the database server coming from the Web-Servers of the monitored buildings. The fourth layer incorporates the equipments and associated functions responsible for the reception, processing and storage of the data coming from all the monitored loads and for the control of the on-line access to these data (given to users with special privileges). The stored data are analyzed and processed by an application program in order to extract from them the relevant information.



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