EVALUATION OF BEHAVIOR ESTIMATION USING WARD'S METHOD IN MULTIFUNCTION OUTLET SYSTEM

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Abstract- Home Energy Management System (HEMS) is standard as a system for reducing power consumption in ordinary homes. The system prevents the users from forgetting to turn off home appliances. However the system is too simple to more reduce power consumption. Therefore we aim to reduce power consumption by figuring out a user's behavior to control home appliances. However to estimate user's behavior is difficult for the system. So we develop Multifunction Outlet System into a function to control home appliances. The function uses Ward's method which is an unsupervised learning for estimation of a user's behavior. In this paper, we evaluated a result of estimate of a user's behavior from sensor data by Ward's method.

Index terms: Ward's method, Sensor Networks, HEMS.