EnergyAware: Personal Energy Monitoring System

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***Abstract*—**

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I. Introduction

Many times in the fields of Smart Buildings and Smart Homes, we disregard the essential concept of Energy Proportionality. In commercial buildings and residential homes, it may be true that there is a high inherent overhead and therefore proportionality cannot be achieved. But on a smaller scale, like apartments and single bedrooms that most young people live in, this proportionality is truly achievable, given that there is much less energy overhead. When we are not at home, our energy usage should be close to nothing and it should increase when we are present. But, the fact that our energy usage is not proportional should not be blamed on the users themselves. In fact many users would be readily willing to reduce their waste usage and adjust their overall usage. But power and energy usage measurement and statistics are not readily available or accessible to users, so they have no way of knowing how or in what ways they should change. In this paper we look to change this so users can be more aware of their energy consumption.

A. Jevon's Paradox

Jevons paradox says that when the efficiency of usage of a resource is increased there will be an increase in usage and demand and in effect there will be little to no change. While this may not be completely true when it comes to energy resources, it may be limiting our potential of energy savings. There is an aspect to Green Computing that cant be solved by technological innovations alone. In some ways, significant improvement is dependent on changing user's usage and their demand habits.

B. Belkin Wemo

Our measurement sensors are Belkin Wemo Insight Switches. These switches come with free software through an iOS and Android app.

II. Conclusion

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Appendix A
Proof of the First Zonklar Equation

Some text for the appendix.

Acknowledgment

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References

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