A SMART_HOUSE CONTROL

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OUTLINE

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INTRODUCTION & BACKGROUND CONT'

Definition: A house or a home in which its devices and appliances are capable of communicating with one another and can be controlled remotely by a time schedule from any room in the house, as well as remotely from any location in the world by phone or internet

INTRODUCTION & BACKGROUND
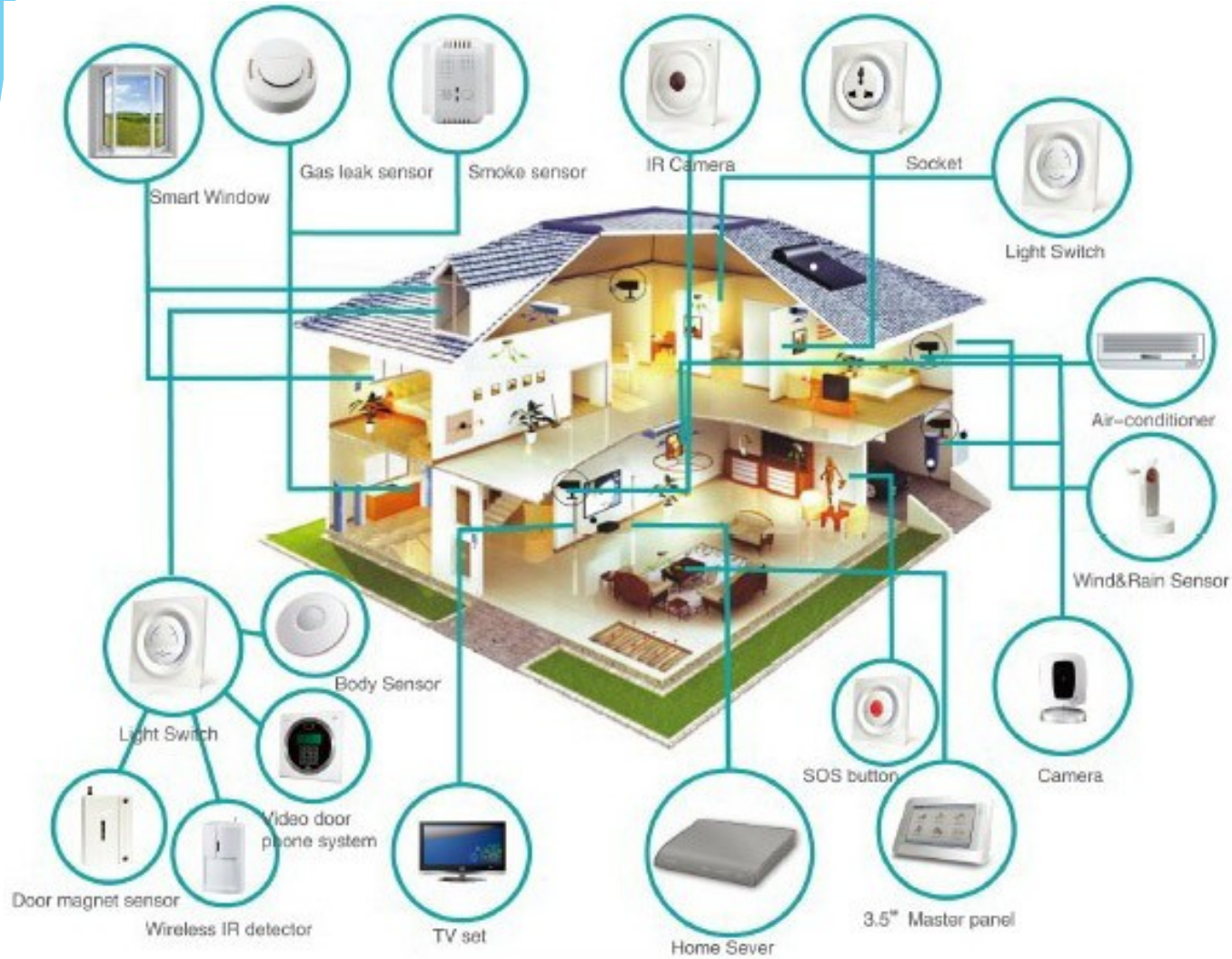
OBJECTIVES

1. To manage energy consumption in the house.

2. To prevent fire outbreak by gas leakage

3. To Ensure the security of the home

THE SYSTEM

The smart house system for the purpose of this project uses light and gas sensors to do the following:

1. Senses that, when the lights intensity in the home reaches a certain threshold value, it sends an email to the home owner or all other residence in the house.

2. Senses a gas smell at a certain threshold value, it sends an email to the home owner or all other residence in the house.

THE SYSTEM CONT'

The following languages were used to program the system

1. C language to program the z1motes (the BR and the UDP-Client).

2. A Rpi was running a Python server to forward messages to the Internet through the gateway.

3. The UDP client collects the sensors information and sends to the BR wirelessly using the IEEE802.15.4 protocol

RESULTS

DEMONSTRATION

CONCLUSION

The objectives of the program was partly achieved in that:

1. The light and gas leakage could be sensed.

2. In this context, the scope was limited in view of that, no action was taken to either stop the gas leakage or switch on/off the lights after the alerts.

WAY FORWARD

To expand the program to include the following:

1. To control the devices in the house remotely after an alert has been received using IoT.

2. An SMS alert in case of Internet failure.

3. Integrate the Z1 mote into a switching system to be able to power ON/Off devices in the house.

* **Eric** to continue working on the project.

The system can be adopted by power and water organizations to manage the energy and water supply situations in their countries and also house owners for security purpose.