

FINAL PROJECT PRESENTATION

Participatory Health-care
System.

(Sensing and communication)

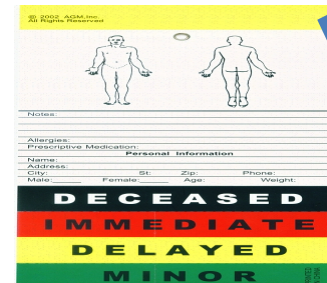
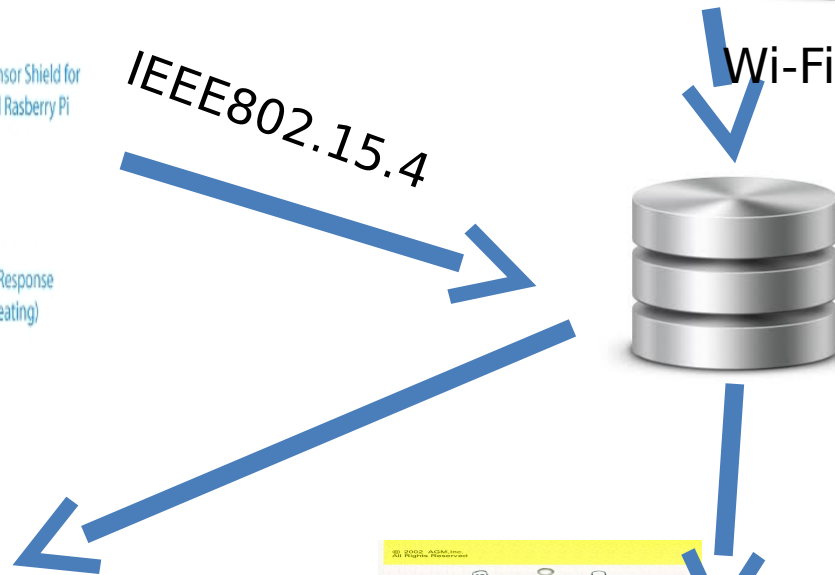
- **Student:** Claude Kakoko Lubamba
- **Supervisor:** Prof Antoine Bagula

OUTLINE

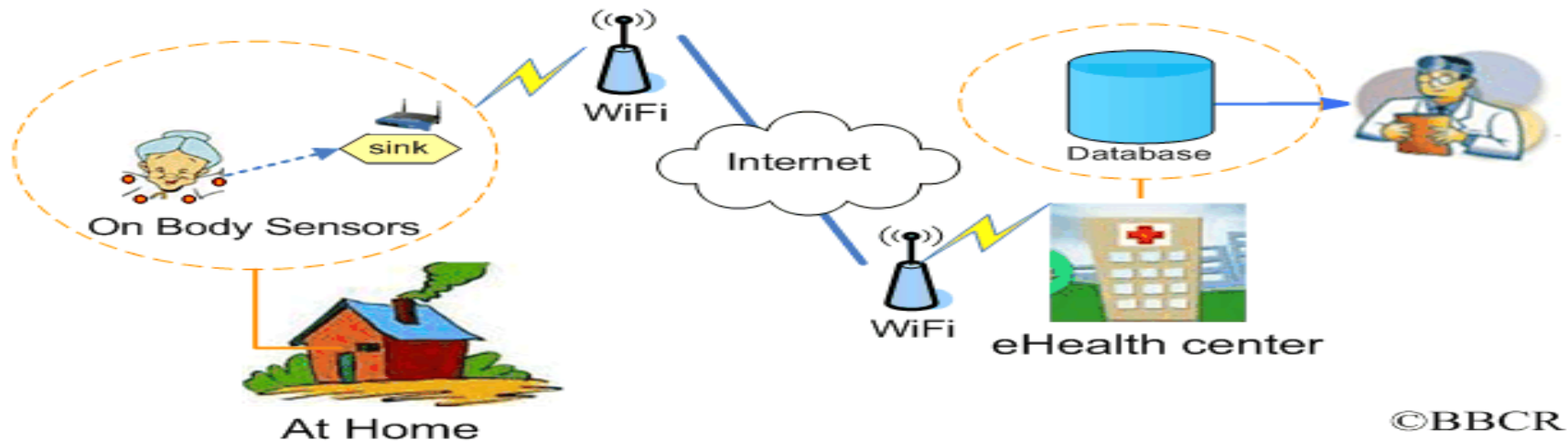
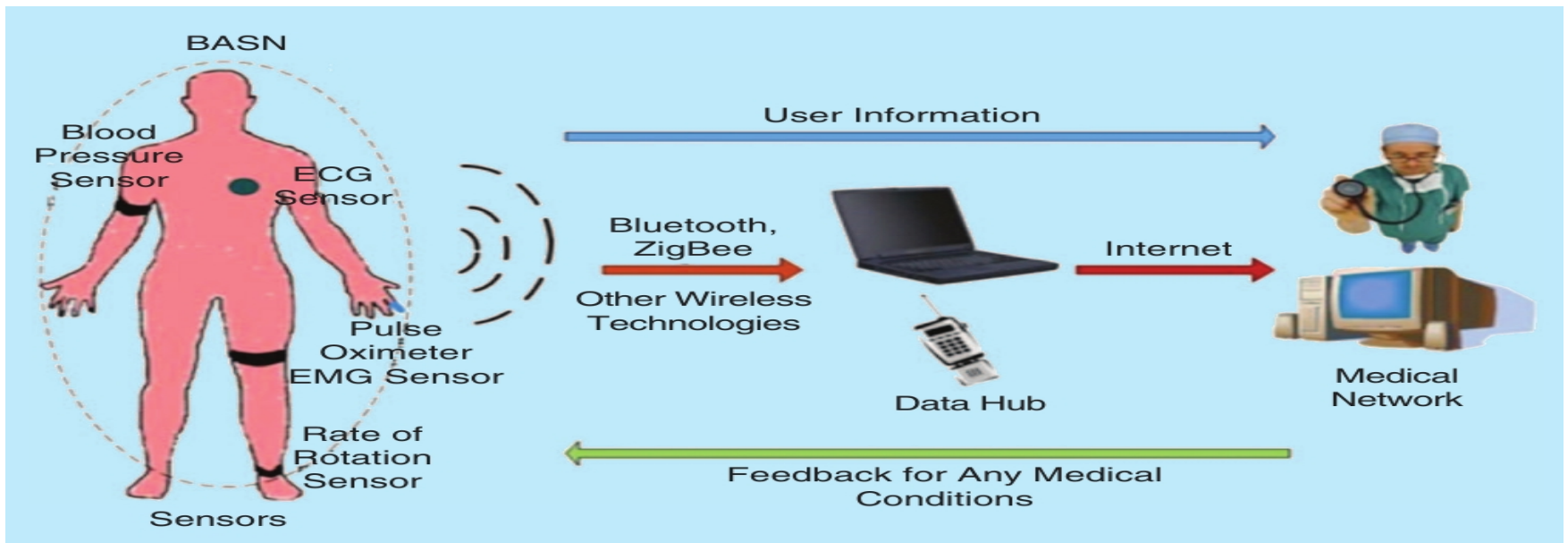
- PHSys project overview and Task description.
- Sensing and communication task.
- User requirements.
- Tools used
- PHSys Apps
- Testing
- Conclusion.
- Demo
- Questions.

PHSys Overview

E-health sensor platform



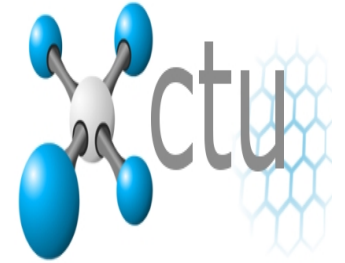
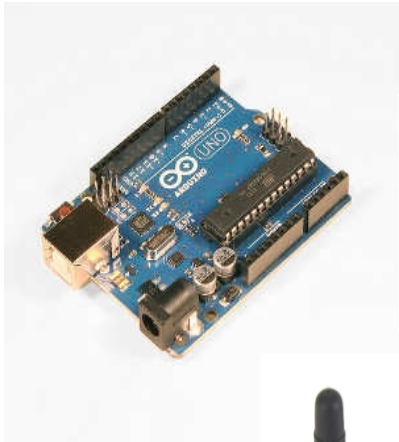
Sensing and Communication



User Requirements

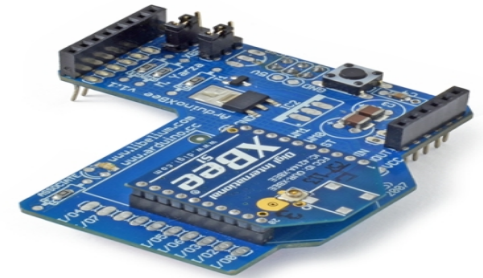
- Sensing mechanism.
- Data transfer between sensing kit, sink node and database.
- Security in communication(to avoid intrusion).
- Display system to physically see the data being sensed.
- Sensor kit required and well wrapped to make the system easy to use.

Tools and Equipment.



Configuration & Test Utility Software

A Digi International Inc. product.



PHSys APPs.

1. Android app(To be shown in the demo):

- ❖ To check whether the reading is taking place
 - ❖ Not accessing anything from database
- ❖ Showing graphical representation of the airflow
- ❖ Showing the patient position

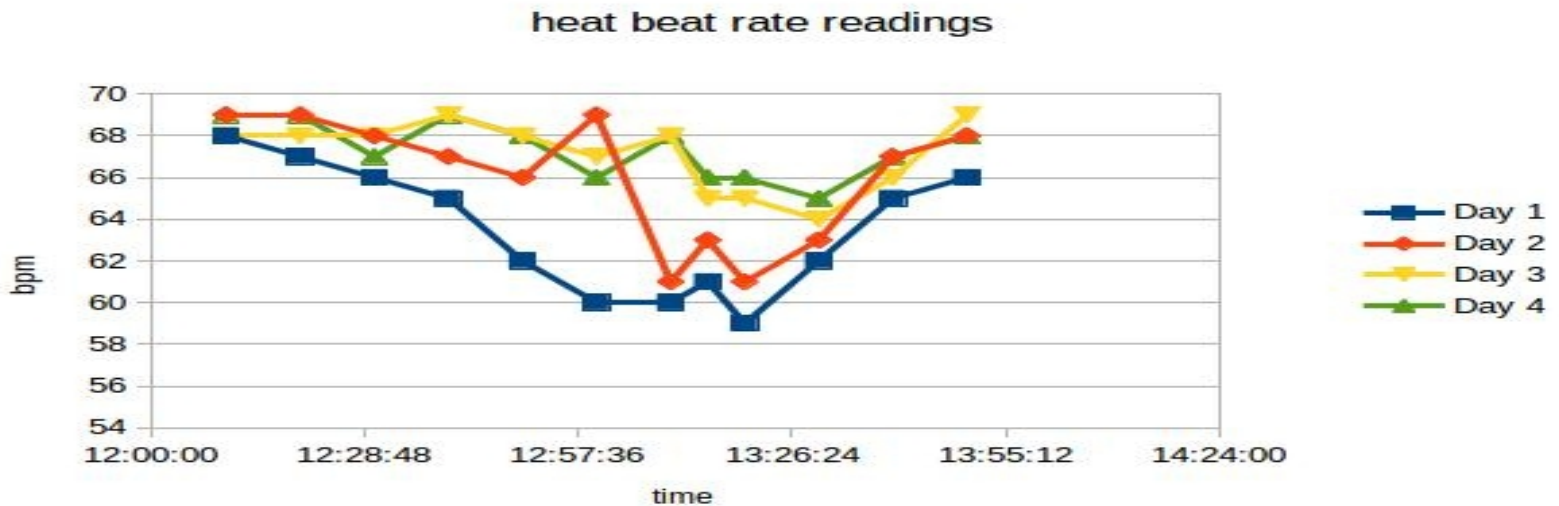
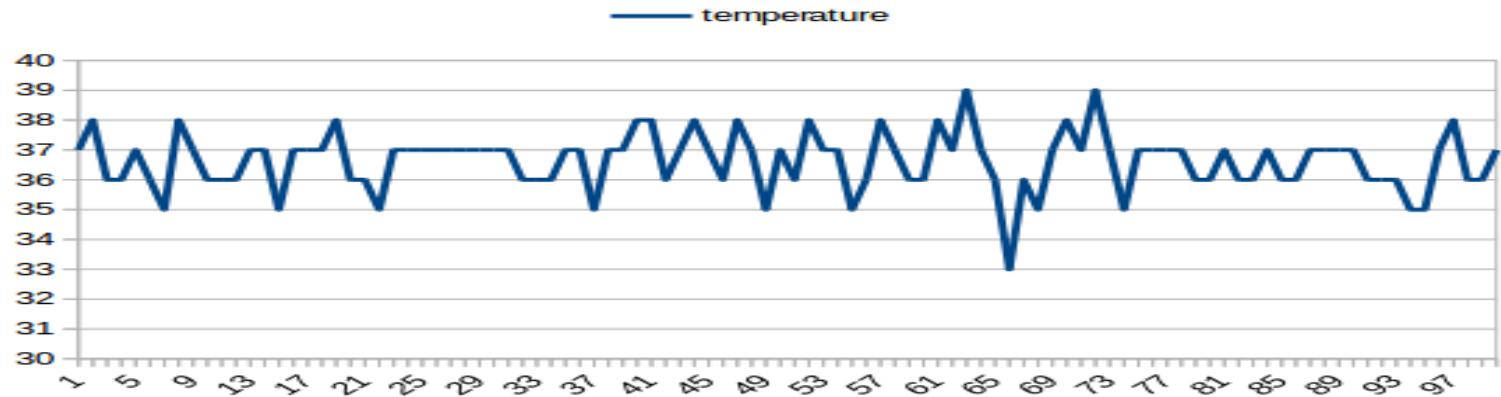
2. Web app(To be shown in the demo):

- ❖ Query patients vital.
- ❖ Displays it on a simple web page.
 - ❖ Pull the data from the central database
- ❖ Displays all the information stored about the patients

Testing

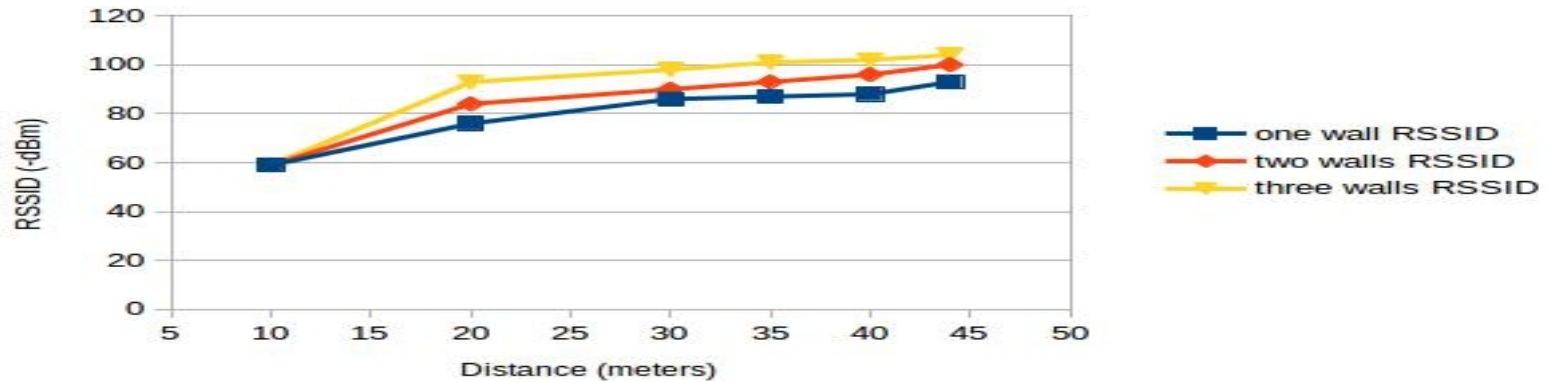
- Unit tested each sensor devices for faultiness.
- Did performance testing on sensor devices(readings from a healthy person for a period of time showed regular results)
- Communication protocols performance testing(indoor and outdoor coverage)

Testing(Continue)

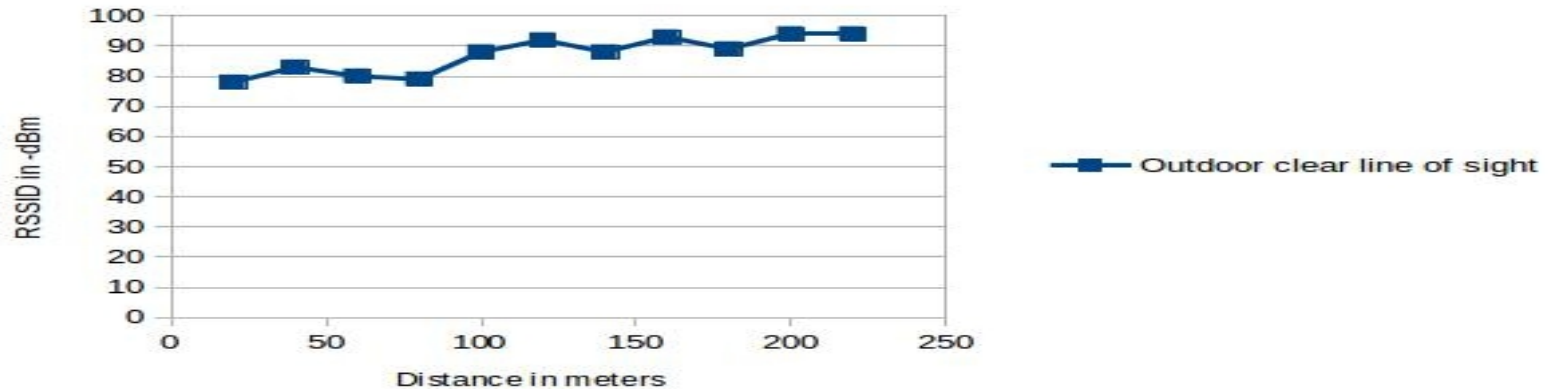


Testing (Continue)

indoor Xbee pro S2 graph

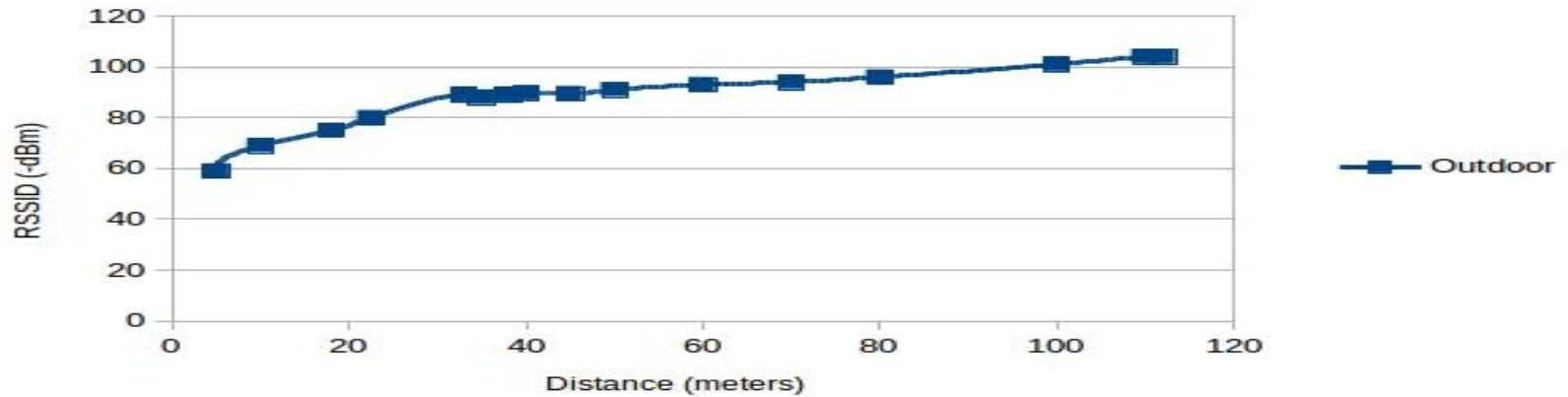


Outdoor coverage range with Xbee S2

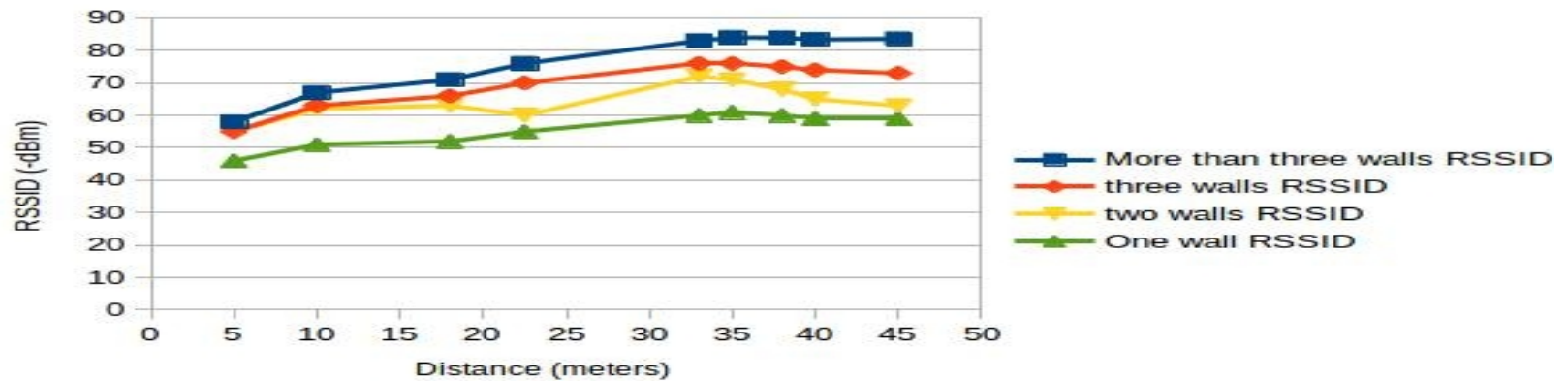


Testing (Continue)

outdoor coverage plot



Indoor performance Xbee



Conclusion

- The results are satisfying.
- We could not test the system on real patient due to ethical issues and legal limitations.
- We tested it on health person.
- The system is not in a field readiness state.
- System Still need refinement to get it ready for the field (future works and more researches to do)

DEMO