

UNIVERSITY OF ST ANDREWS

CS4099

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# ILNP Routing for IoT

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**Abstract**

**Declaration**

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## **1 Introduction**

1. Explain current issues with IP
2. Explain ILNP, and how it addresses these issues
3. Explain how this project plans to exemplify the benefits of ILNP

## **2 Context Survey**

1. ILNP research
2. Ad Hoc sensor networks
3. Energy efficient routing protocols

## **3 Requirements Specification**

1. Describe requirements of resulting python library

## **4 Design**

1. Component structure (socket interface, router/dsrservice/forwardingtable, raw sockets)
2. Runtime behaviour (packet parsing, routing, and forwarding)
3. Use figures to visualise project structure and workflow

## **5 Experiment**

1. Discuss aim of experiment (to measure efficiency of the used routing protocol with ILNP, and compare to IP).
2. Explain case study, with reference to source (i.e. agricultural sensor setup)

3. Use visuals to show locators to real life position and sensor radi
4. Discuss experiment configuration (how machines were chosen, results collected, battery life simulated, etc)
5. discuss choice of metrics, justification and how to compare results.

## 6 Results and Discussion

1. Show heat map of results
2. Explain features of heat map
3. Describe the behaviour if IP was used instead through analysis
4. Discuss weaknesses with experiment

## 7 Conclusions

1. was the goal met, and if so how well?
2. future work with ILNP, possible suggestions of better alternatives to the routing protocol used.

## 8 Appendix

1. Instructions on installing, and executing and using the python module, and how to configure the experiments.

[1]

## References

- [1] Canonical Ltd. sched - overview of cpu scheduling. <http://manpages.ubuntu.com/manpages/cosmic/man7/sched.7.html>. Accessed: 2019-03-01.