KU LEUVEN

Internet of Things code deployment metrics

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maandag 10 november 2014

0 – Outline

1 – Outline

- TODO hier een afbeelding zoeken en aan de hand hiervan uitleggen!
- composed of embedded computers, or ‘motes’
- low power radios and sensors
- detecting phenomena

1 – Sample applications

- military
- environmental science
- medicine
- domotics
- many more

- TODO beschrijven

- energy-efficient
- robust
- TODO verder bij survey paper

- TODO 3 grote factoren in energie verbruik,
- uitleggen dat transmitting het meeste energie verbruikt
- Mss een grafiekje dat de verschillen duidt?

2 – Outline

2 – What is middleware?

- TODO uitleggen adhv een diagram

- Alternatieven uit papers(energy aware deployment en looci)
- Types middleware

- Kort historisch
- Hoe werkt t. (vb vm?)

3 – Why is it important?

- WSN motes need to be long-lasting
- energy efficiency is key

3 – How to measure?

- oscilloscopy!
- use triggers in software

4 – Conclusion

5 – Bibliography

Akyildiz, Ian F et al. (2002). "Wireless sensor networks: a survey". In: *Computer networks* 38.4, pp. 393–422.

Hughes, Danny, Eduardo Canete, et al. (2013). "Energy aware software evolution for wireless sensor networks". In: *World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2013 IEEE 14th International Symposium and Workshops on a*. IEEE, pp. 1–9.

Hughes, Danny, Klaas Thoelen, et al. (2009). "LooCI: a loosely-coupled component infrastructure for networked embedded systems". In: *Proceedings of the 7th International Conference on Advances in Mobile Computing and Multimedia*. ACM, pp. 195–203.

Mainwaring, Alan et al. (2002). "Wireless sensor networks for habitat monitoring". In: *Proceedings of the 1st ACM international workshop on Wireless sensor networks and applications*. ACM, pp. 88–97.