

Research Report

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May 5, 2005

Project: FORGE

Topic: Reliability and Power

1. Survey on Fault Tolerance and Energy Efficiency

- Title: "Towards Energy Efficiency and Reliability on Mobile Systems"

- Status:

* I'm still working on this survey with additional related work.

2. Paper on Video Encryption to ICME 2005

- Title: "An Experimental Study on Energy Consumption of Video Encryption for Mobile Handheld Devices"

- Status

* The camera ready version of this paper has been submitted but font errors occurred. So I'm refining it.

3. Talking to Chongjiing Chen (chongji@uci.edu) at Pai Chow's group

- Subject: "Power issues at Wireless Transmitter"

- Summary:

He is interested in energy-efficient routing in Ad-hoc networks working with Prof. Pai Chow. His group already developed and implemented two sensor nodes which are ECO and DURANODE. ECO is targeting more energy-efficient small sensor node compared to Berkeley Motes and DURANODE is bigger sensor node as a bridge or a sink, I think, with more performance-efficient wireless interface like WiFi. Especially he is considering how to decrease energy consumption further using the existing routing protocols like AODV. One idea is physical-layer aware protocol, which uses energy characteristics of transmitter. At the next meeting, he will give me more specific problems in his research.