

Implementing Software on Resource-Constrained Mobile
Sensors: Experiences with Impala and ZebraNet

Ting Liu
Christopher M. Sadler
Pei Zhang
Margaret Martonosi

Departments of Electrical Engineering and Computer Science
Princeton University

using mobile sensors (energy constrained) to track zebra migration

This paper poses an interesting situation which brings up many different constraints and obstacles to achieving it's goal with mobile sensors... The detailed explanation of how the different power saving choices were made. The hardware choices were in depth enough to be interesting but easily understandable, and the communication protocol discussion was good (along with diagrams that made good sense compared to most papers I have read).. which in the end made an overall easy paper to read. I don't know if this made me think it was better than it really was. But I would say this was one of the more interesting papers I have read in this class.. good problems and good solutions, I would definitely refer back to this paper if I needed to do something with sensors.

Especially something that I needed power over a long period to do GPS tracking and data aggregation.

As far as problems, I don't know... this paper pretty much met my expectations for it... I didn't know what to expect from "zebra net" but it did a good job of meeting these expectations hah
From a real-time systems aspect this was very interesting and the protocol (forwarding/acking) messages and the time multiplexing (with time synchronization) was really interesting relating back to what I experienced earlier this year with sensor nodes. I guess I am not making points that should have been improved...

Well as far as for the future... like they said they could have had more memory which makes sense...
and maybe do a correlation study between the optimal levels of sensor aggregation and how sunny it is during the day, to balance the two...