Mobile wireless sensor network (MWSN) for livestock monitoring

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I. Project Proposal

The purpose of this project is to design a wireless sensory network (WSN), used for monitoring different health characteristics of cattle, and possibly other livestock.

One of the problems that might arise with this kind of appliction is that the range of the nodes tranceivers might not be sufficient, due to the mobility of the animals. To cope with this problem, we plan to use a number of relay nodes that will be placed on fixed locations in the field so that at any time, at least one animal is in range of a relay node. These relay nodes will then be connected to a base station that keeps a database of all relevant data gathered from the animals.

We plan to use Contiki as the operating system of the network nodes, and test the whole system using the Cooja simulator. As Cooja does not include any mobility models, we aim to make some simple mobility models to simulate the movement of the animals. The latter is however not the main focus of the project.