Mobile Data Collection in Wireless Delay Tolerant Networks

Progress Report

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A report on the progress made to date.

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Tait communications is a Christchuch based telecommunications service provider and the sponser of this project. Taits target market is primarily emergency services, utility and transport operators who value reliabilty and ease of use.
The projects brief is to develop a delay tolerant network (DTN) for sensor data collection using Taits' existing product, Unify Vehicle (UV). Unify vehicle is an on board radio unit used to give any vehicle it's placed in, communication over DMR. The UV has a built in computer with the yocto-standard open embedded linux distrobution which we will be using as part of the delay tolerant network. Figure 1 shows a top level block diagram of the project with all the connections in the network.
The project has been chosen to be split up between group memebers with each member taking responsibility for one major part of the network. I will be taking responsibility for the UV itself. This will involve proramming the UV to communicate to the lora base station, the base station, and possibly other UVs. Iqbal will be responsible for the LoRa basestation and LoRa terminal. He will be working closely with me to get the basestation and UV comminicating in a delay tolerant fashion. The terminal will also need to have a sensor of some sort.