Remote Medical Monitoring
Through Vehicular Ad Hoc Network

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Main Idea

**Patient Sensing**
- Each patient is carrying a sensing device capable of storing a limited amount of data.

**Data Gathering**
- Public safety vehicles patrol the city
- When in range the patient device uploads the data to the vehicles

**Data Delivery**
- Vehicles forward the data to the hospital in both multi-hop and store and carry fashion

The Sensing Device

**Medical Monitoring Platform**
- A lightweight wearable system
- Variety of the sensors can be used individually or in the group to collect desired physiological data
- Mica2 Processing units acting as gateway mote

**On Body Terminal**
- Collects the sensed data from the sensors
- Filters the data
- Keeps track of patient’s location via embedded GPS
- Initiates the communication with vehicles

The Vehicular Network

**On board Equipment**
- Laptop equipped with
  - 802.11g wireless card
  - Mica2 mote
  - GPS
- Leading car has connection to the internet through EVDO

Experiment Results

**Experiments Setup**
- The Mica2 triggers the WiFi interface of the patient
- Data is uploaded to the car as it passes by
- Data is forwarded through the ad hoc network to the leading car
- The leading car forwards the data to a central server