ABSTRACT
The main task was to design and implement a communication protocol, to report monitoring/sensing information from a network of parking meters. Evaluation metrics include reliability, energy consumption at the meters, timeliness of transmission, and ability to recover from various failures.

The SAFE (Synchronized Adaptive-Forwarding Efficient) Routing Protocol was designed for this purpose. This on-demand routing protocol takes into account the highly variable nature of wireless networks and allows the customer to decide on the best trade-off between energy efficiency and reliability. The level of reliability was increased from about 18% data loss with single-path routing to 2% with SAFE’s probabilistic multi-path routing.

Although the SAFE Routing Protocol was designed for this particular application, it can be easily adapted for any multi-path wireless network where there is a trade-off between energy efficiency and reliability.

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11:30 am – 12:00 pm  
1:00 pm – 2:30 pm