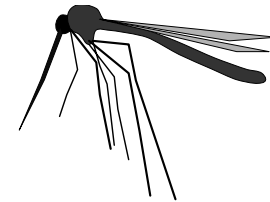


# MosquitoNet Research Topics



Mary Baker  
mgbaker@cs.stanford.edu  
<http://mosquitonet.stanford.edu>

Departments of Computer Science & Electrical Engineering  
Stanford University



# MosquitoNet Research Areas

Studying network, systems and application issues in mobile and wireless computing

General themes: ease of use, transparency, and control over communication

Past topics:

- Seamless mobility
- Flexible network support for mobility
- Consistent overhead byte-stuffing



# Current Topics

## Mobile People Architecture

- Make it possible to reach mobile people anytime/anywhere on any communication device while maintaining privacy

## Security for ad hoc networks

- Give sender/receiver control over how their packets are routed (through trusted nodes)
- Key distribution issues in a network with no infrastructure

## User-friendly security for public access to networks

- How to allow and authenticate visitors to your public subnets while protecting your other networks



# Current Topics, continued

## Bandwidth Measurement

- Algorithms and tools for fast, accurate measurement of bottleneck bandwidth and available bandwidth

## Collecting real data about mobile networks and usage patterns

- Traces from Metricom network analyzed for mobility patterns and network parameters
- Starting on local-area (Gates Building) wireless traces

## Configuration management for mobile hosts

- No-futz network access for mobility



# Mobile People Architecture

Enable ubiquitous reachability

Reach a person by name, regardless of the current device/application

Convert among protocols/applications

Convert from my email to your cell phone

Thwart spam (receiver control)

Only receive communication you want, when/how/where you want

Maintain location privacy

Do all this without revealing your location to senders

Self-contained system with no changes required in other networks