Location-Based Routing

An overview and possible directions for GeoCRON

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May 14, 2013

Introduction

- Traditional routing
  - Unique address: IP, MAC, Peer ID, etc.
  - Source routing: next hop address, neighbor index
  - Local routing: distance-vector, link state, label-switching

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- Why location information?
  - Geocast: deliver messages to all (or some) nodes in target region
  - Latency: request from closer server, route locally when possible
  - Congestion: confine route requests to smaller regions (MANETs)
  - Energy: closer nodes need less radio power to reach
  - Sensors: regional event detection, spatial querying
  - Planning: paths (robots), surveillance cameras (focus on area target will appear next)
  - Recovery: avoid problematic areas of the network

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Overview

- Location service
- Greedy
- Geometric
- Clustering

Location Service

mention voids

Geometric Routing

right-hand rule analagous to following the right hand wall in a maze introduced in Compass Routing on Geometric Networks