

On the Mobility Models for Mobile Ad Hoc Networks

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Outline

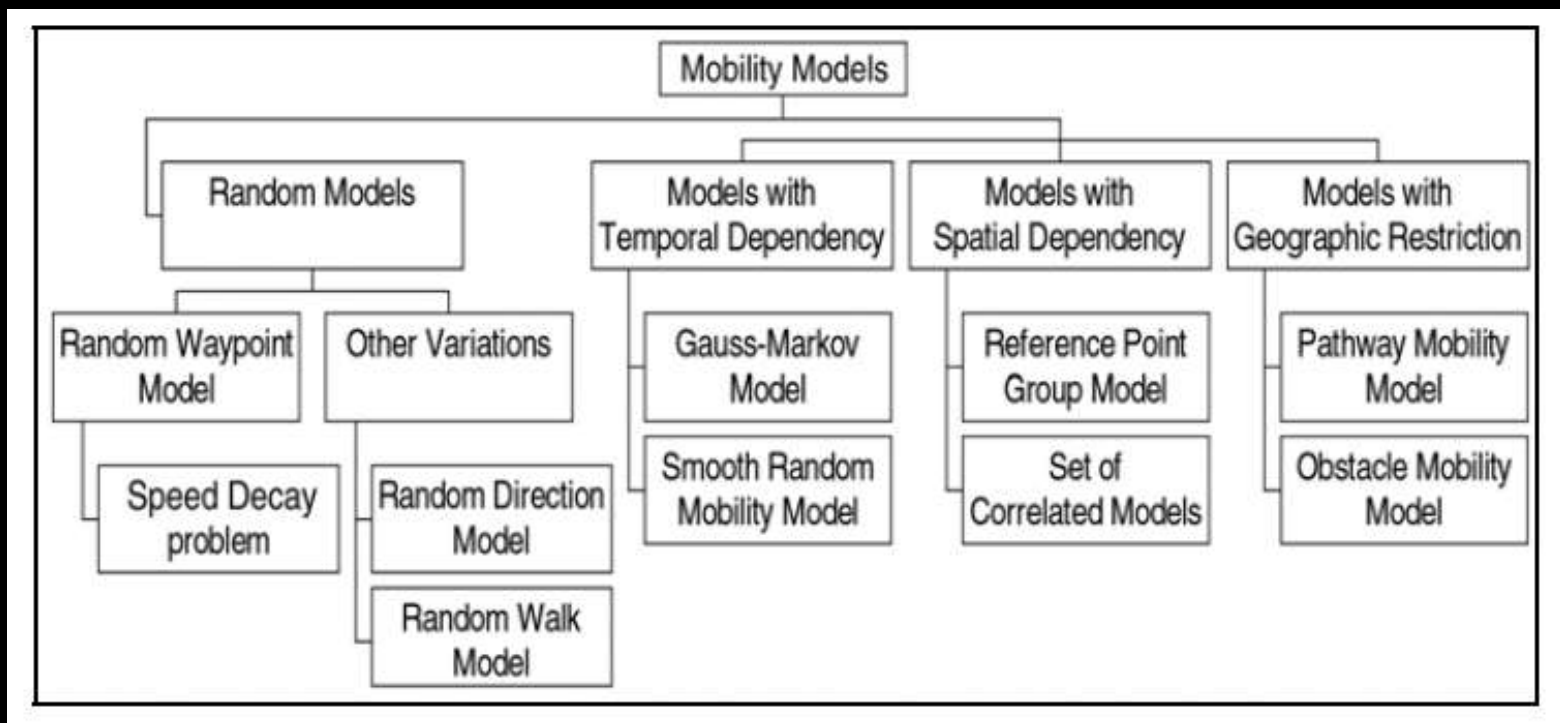
- Introduction
- Motivation
- Objective
- Project details
- Schedule
- Reference

Introduction1

- What is Mobility Model?
- Why it is important for Mobile Ad Hoc?
- What kinds of Models are in Mobile Ad Hoc?

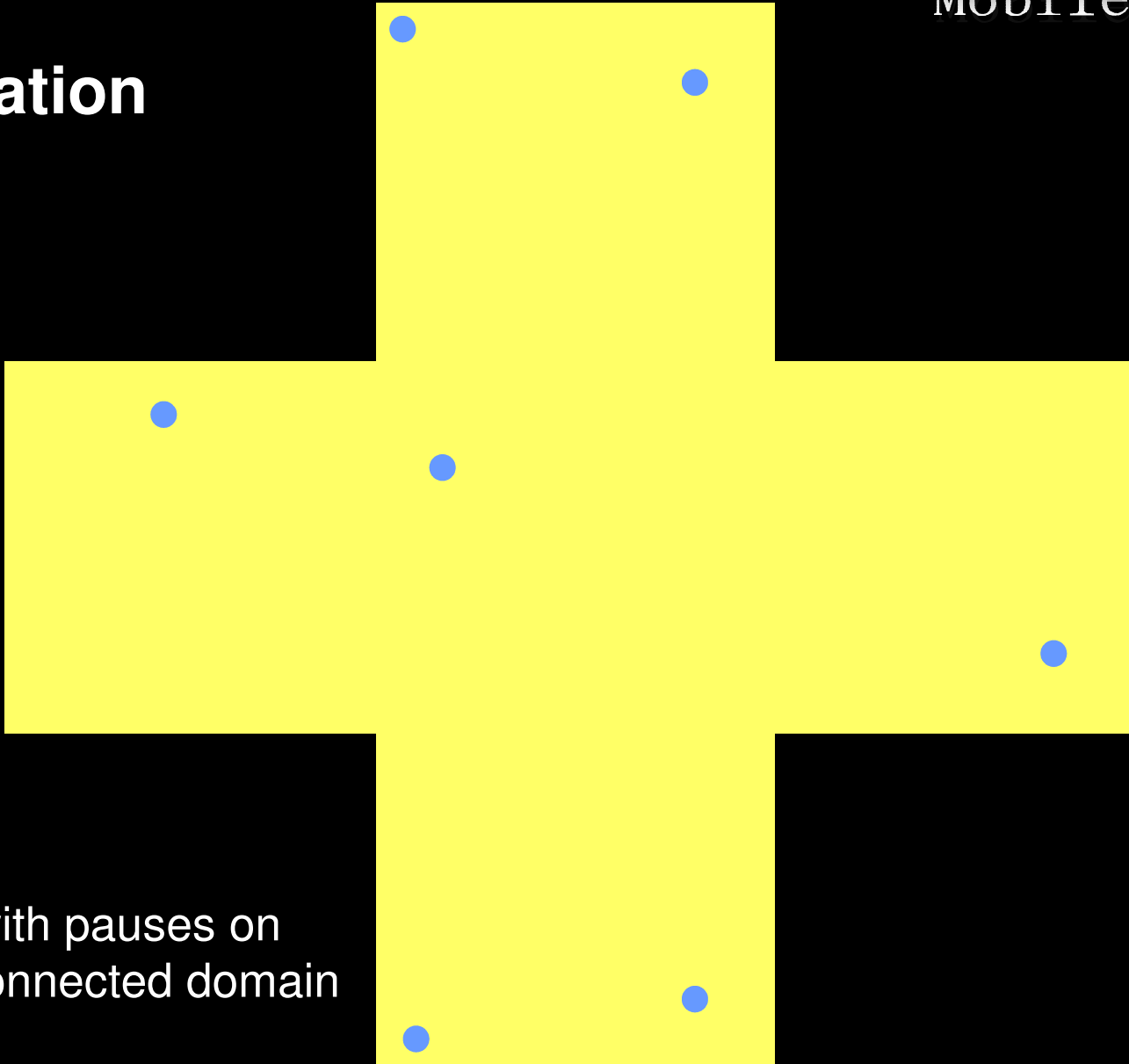
Introduction2

- Be designed to describe the movement pattern and state of mobile users
- Play an important role in determining the protocol performance
- Trace-based mobility models and Synthetic mobility models



Motivation

RWP with pauses on
general connected domain



Objective

- Study different exist Mobile Ad hoc mobility models
- Compare different exist Mobile Ad hoc mobility models
- Construct new Synthetic mobility models and improve Traced-based mobility models for several movement patterns

Project details

- Approach
- Tool
- Simulation

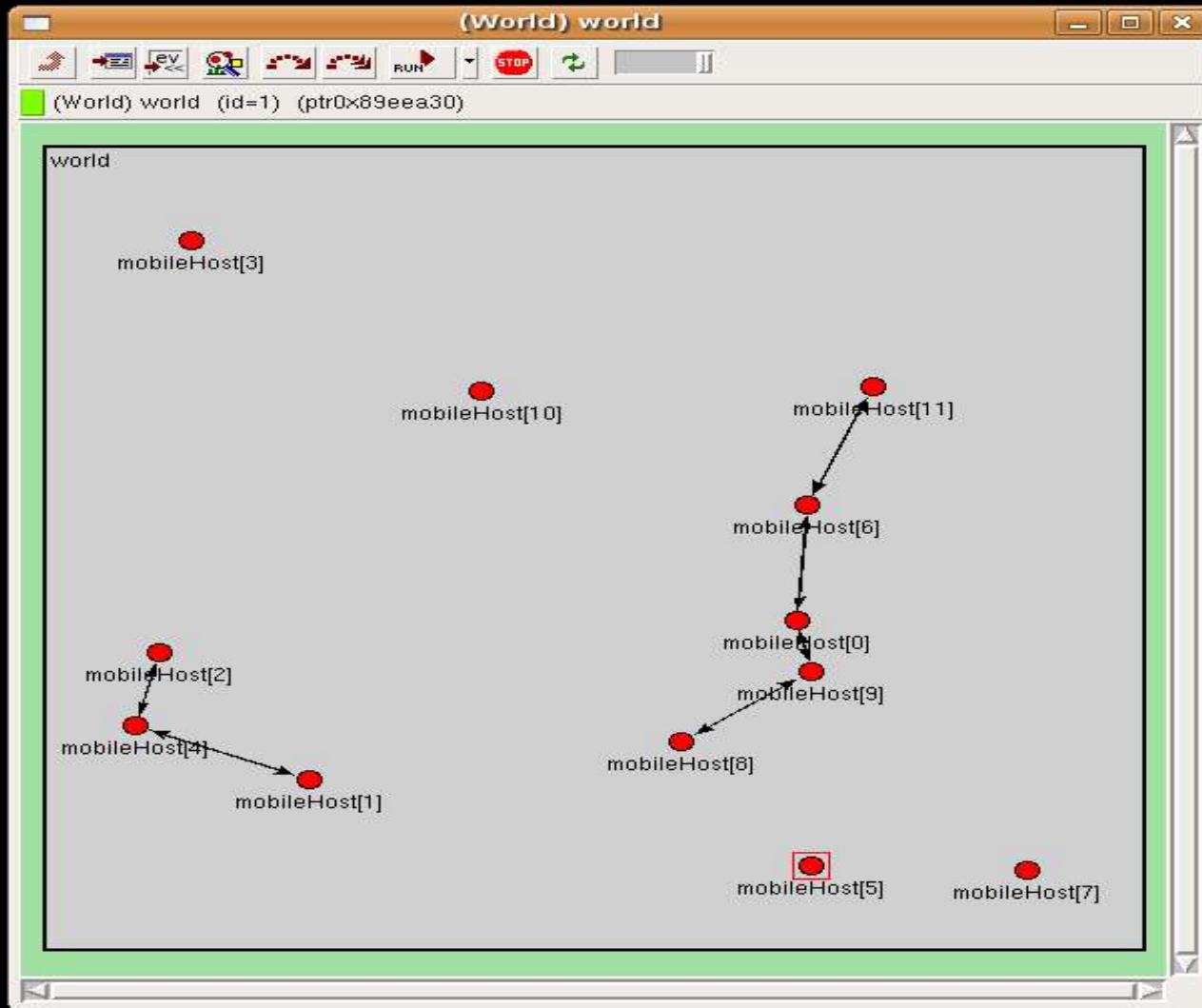
Approach

- Traced-base Models
 - Use the databases of “A Community Resource for Archiving Wireless Data At Dartmouth”
 - Construct new Mobility Models in different scenarios
 - Different Mobility Models impact on Routing Protocol

Tool

- Hardware
 - 2 Laptops
 - GPS
 - Gumstix
- Software
 - Running environment
 - Ubuntu-7.04.04
 - Simulation tool
 - OMNet++ (Objective Modular Network Testbed in C++)

Simulation



Schedule

30.10-11.12	Study linux and gumstix
12.12-12.1	Study Omnet++ and Mobile Ad hoc mobility models
13.1-20.3	Build mobility models
20.3-15.4	Write the paper

Reference

- Christian Schindelhauer, **Mobility in Wireless Networks**, SOFSEM 2006, 32nd International Conference on Current Trends in Theory and Practice of Computer Science, 2006, p. 100-116
- F. Bai, A. Helmy, **A Survey of Mobility Modeling and Analysis in Wireless Adhoc Networks**, Book Chapter in the book on Wireless Ad Hoc and Sensor Networks, Kluwer Academic Publishers, 2004
- Jean-Yves Le Boudec (EPFL) joint work with Milan Vojnovic (Microsoft Research Cambridge) **Random Trip Stationarity, Perfect Simulation and Long Range Dependence**

Thanks for your attention

