

Mobility Models and Simulations

Opportunistic Networking Environment (ONE) Simulator
for DTN Protocol Evaluation

Introduction

The ONE is a simulation environment that is capable of

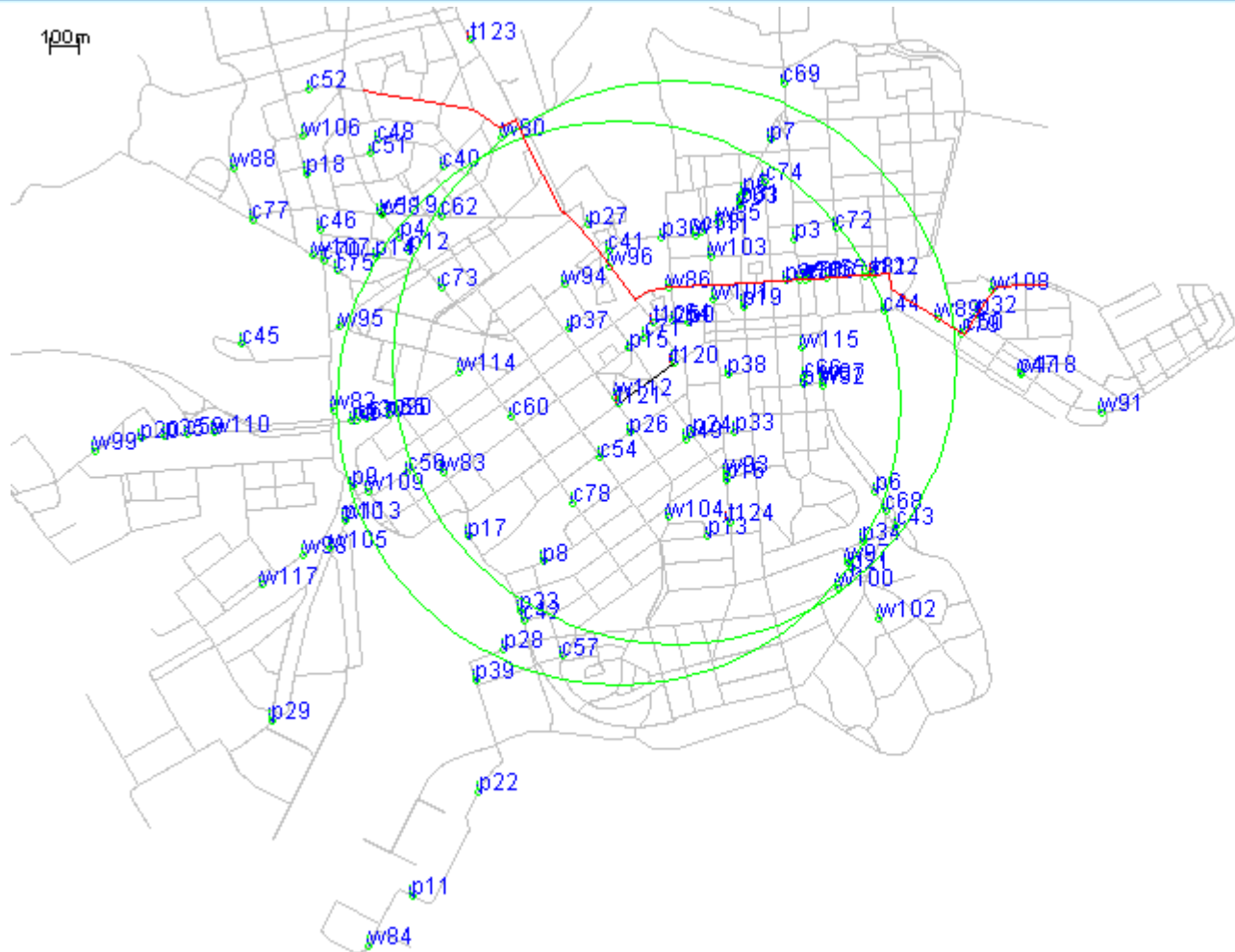
- generating node movement using different movement models
- routing messages between nodes with various DTN routing algorithms and sender and receiver types
- visualizing both mobility and message passing in real time in its graphical user interface.

Aims

I want to make sure the following questions:

- How this simulator works
- What can I gain from the results
- How to analyze the results
- If possible, how to set up a new scenario/routing protocol to make new simulations

Screenshot



Screenshot

ONE - SprayAndWait

Playfield graphics

7151.5 12.90 1/s [Pause] [Play] [Next] [Previous] GUI update: 1 [Search] 0.3 [screen shot]

p10 at (1677.52,388.83) M31 (1 copies) routing info [c49->c50] size:599555, UI:46721, received @ 6494.90 path: 3 hops

Event log controls

all	<input checked="" type="checkbox"/>	<input type="checkbox"/>
connections		
up	<input checked="" type="checkbox"/>	<input type="checkbox"/>
down	<input checked="" type="checkbox"/>	<input type="checkbox"/>
messages		
created	<input checked="" type="checkbox"/>	<input type="checkbox"/>
started relay	<input checked="" type="checkbox"/>	<input type="checkbox"/>
relayed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
delivered	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Event log

```
7084.4: Message relayed c59<->p9 M88 (5 copies)
7084.4: Message relay started c59<->p9 M79 (5 copies)
7085.2: Connection DOWN p9<->c59
7085.2: Message relay aborted c59<->p9 M79 (5 copies)
7085.7: Connection UP c75<->w93
7085.7: Message relay started w93<->c75 M77 (10 copies)
7086.2: Message created p18 M90 (10 copies)
7086.9: Connection UP p17<->c77
```

Nodes

- p0
- p1
- p2
- p3
- p4
- p5
- p6
- p18
- p19
- p20
- p21
- p22
- p23
- p24
- p25
- p26
- p27

Discussion & Question

