FROM SMART URBAN MOBILITY TO A FULL-BLOWN SMART CITY IN PLANIT VALLEY

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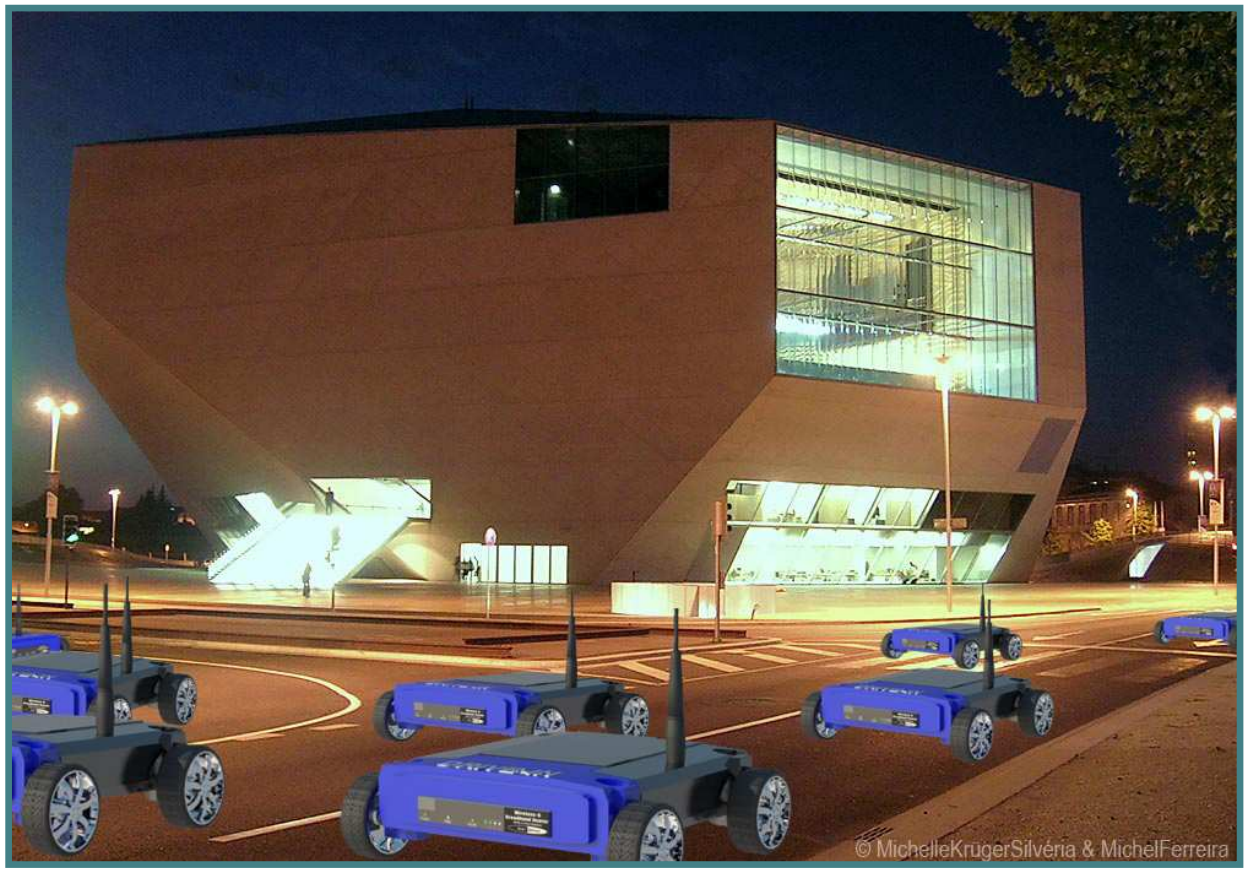
Solving Traffic Congestion in Porto

- A vehicular inter-networking approach.

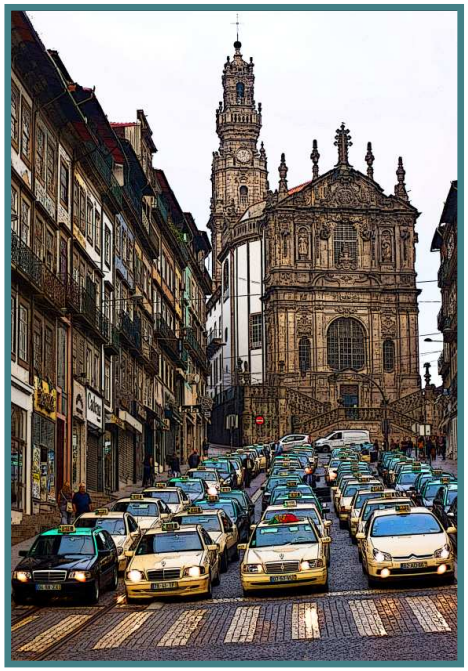


A Few Facts on Road Transportation

- The transport sector represents 25% of the Carbon Dioxide (CO2) emissions in EU.
- Car journeys comprise 70% of all passenger kilometers in EU.
- The cost of traffic congestion represents 1% of the EU GDP.
- Road crashes constituted in 2004 the 9th leading cause of death.
- In terms of years of life lost, the significance of road crashes is significantly amplified:
  - 1st leading cause of death on the age group from 15 to 29;
  - 2nd leading cause of death on the age group from 5 to 14.

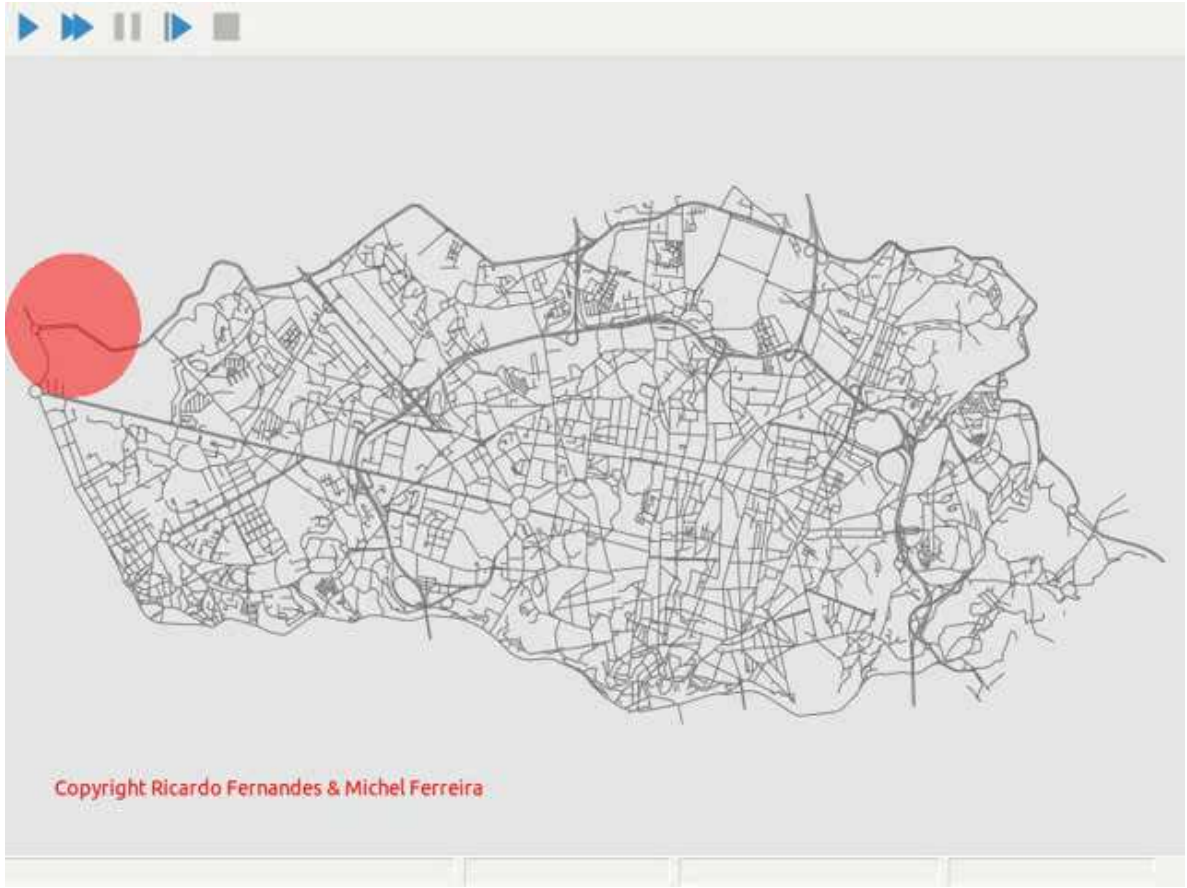
Porto as a Living Lab for Intelligent Transportation Systems Research

- Deployment of a 500 nodes vehicular ad hoc network (taxis in the DRIVE-IN project).
- Understanding informed navigation (NDrive is based in Porto)



Monitoring Urban Mobility

Academic festival - May 4th, 2011 (00:00 AM to 07:00 AM)



The Impact of Informed Navigation

- We are rapidly converging to have a smartphone in each car.
- … and a GPS navigation application in each smartphone.
- We will use these applications to avoid traffic jams in daily commute trips.
- How to compute routes? Selfishly? Socially?

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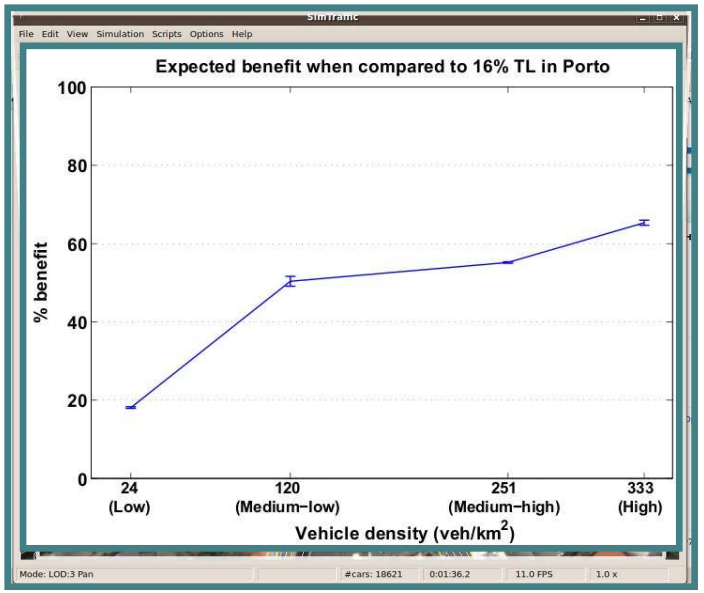
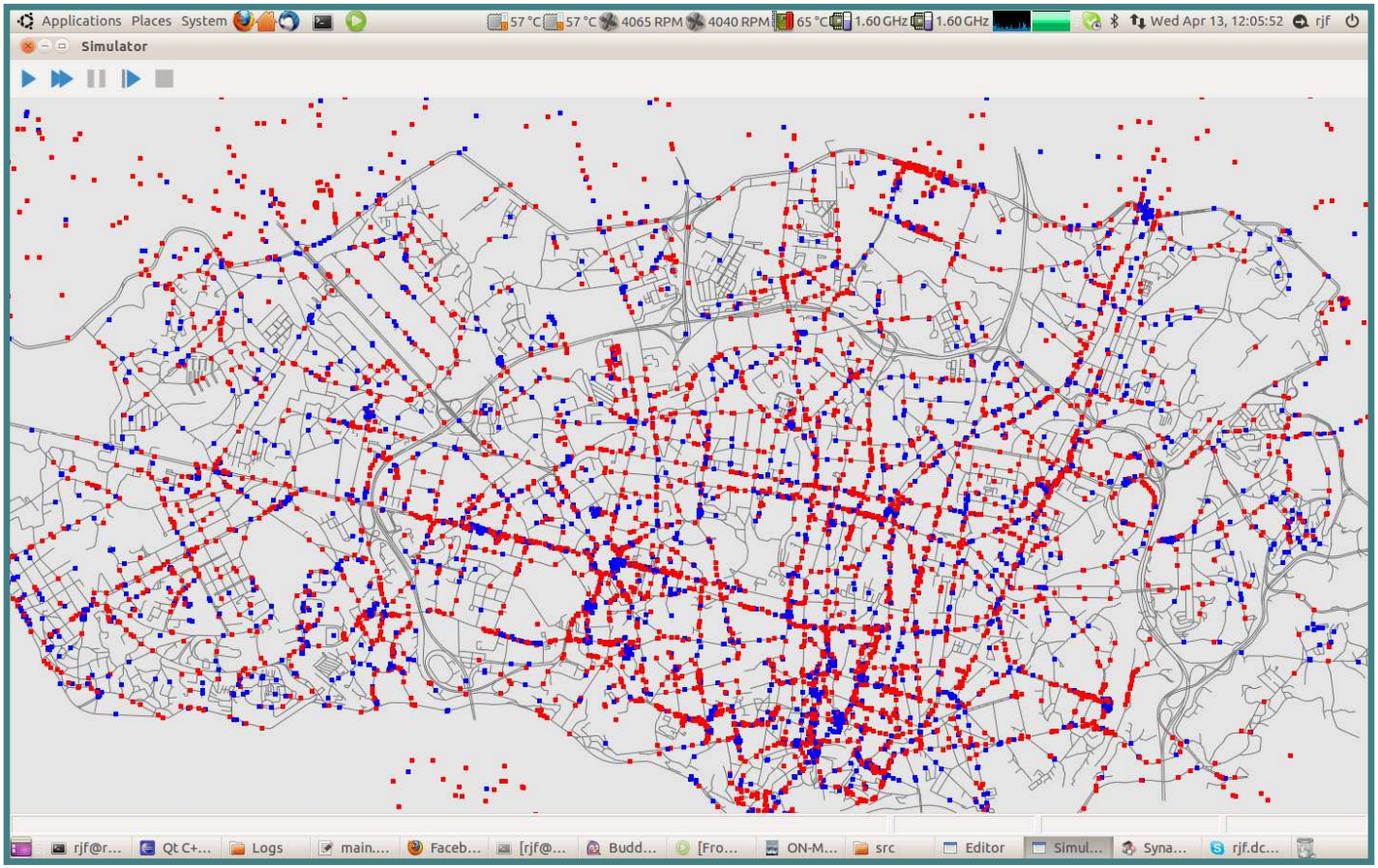
Wider Exploration of the Road Network

- Virtual Traffic Lights
- Ubiquitous and self-organized traffic control in response to ad hoc routing.



Social Networks and Car Sharing

- Taxi sharing through a taxi dispatch system



The Internet Share of the Windshield