



OTFVis

The On-The-Fly Visualiser
Of
MATSim

OTFVis: What?



- Multifunctional visualiser
- Client-Server Architecture
- Lightweight add-on...
- ... Server does not use any resources, when not connected to a client
- Can connect to any running matsim
- Can read from file
- Can replace gunnar's netvis

OTFVis: How?



- Open GL based graphics for client
- Data representation and graphics are separate, could run data with non-GL renderer
- RMI based architecture
- RMI registry might run on a third computer
- SSH based connection
- Goal: Easily extendable

OTFVis: Why?



- Most useful for “Withinday”
- Presentation of information e.g. “COOPERS device”
- For debugging, controlling
- For data mining?
- Please, give input ;-)

OTFVis: Data



- Two different kind of data
 - Constant and dynamic data
 - Constant data needs to be transferred ONCE
 - Dynamic data OFTEN
- Two different way of data exchange
 - On startup (or as bulk data) e.g. all links Ids, lanes..
 - On demand e.g. the plan of an specific agent

OTFVis: Visualisation



- Agent Types represented by icons
- Agents internal state rep. by icons
- Velocity represented by color
- State changes rep. by InfoText
- Link capacity rep. by color
- Link utilisation rep. by bar/color
- Link/Node/Agent Ids by Text
- Traffic Lights by ... Lights
- Traffic counts by text/bar/color

OTFVis: Problems!



- No AGENT representation in MATSim
- PositionInfo must be matched against agentId
- Is an agent a Vehicle or a Person?
- Agent Id?
- What do we want to visualise?
- What might be interesting queries?

OTFVis: Representation



- Every Link/Node/Agent/whatever
 - Offers certain Data connectors with a type
 - E.g. Link might offer some TEXT/BAR places and a color
 - Agent might offer TEXT and BAR and COLOR and ICON
 - ...
- Data comes in from the sim
 - as either float, int or String
 - Has a real world name e.g. "PosX" or "Capacity"
- A Drawer has some input of String/float/int and some output of TEXT BAR COLOR ICON, etc.
- So input data gets connected via drawer to the visualised Net

OTFVis: Visual connector

