

# Simulation of coordinated signals with VISSIM and EC1-simulator---

Knowledge taking people further

# Intro

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- Why simulations?
- Why EC1-simulator?
- Why not?
- How does it work?
- The future?

# Why simulations?

- Easy and cheap to test indoors
- Control of the test environment, no other impacts
- Possible to evaluate adaptive signal control and bus priority
- Possibility to test wild ideas without risk for traffic chaos...
- Possibility to test "dangerous" things without risk for accidents

# Why EC1-simulator?

- You get it "right", even the errors...
- Easy to model complicated signal control
- Easy to model bus priority (PRIBUSS)

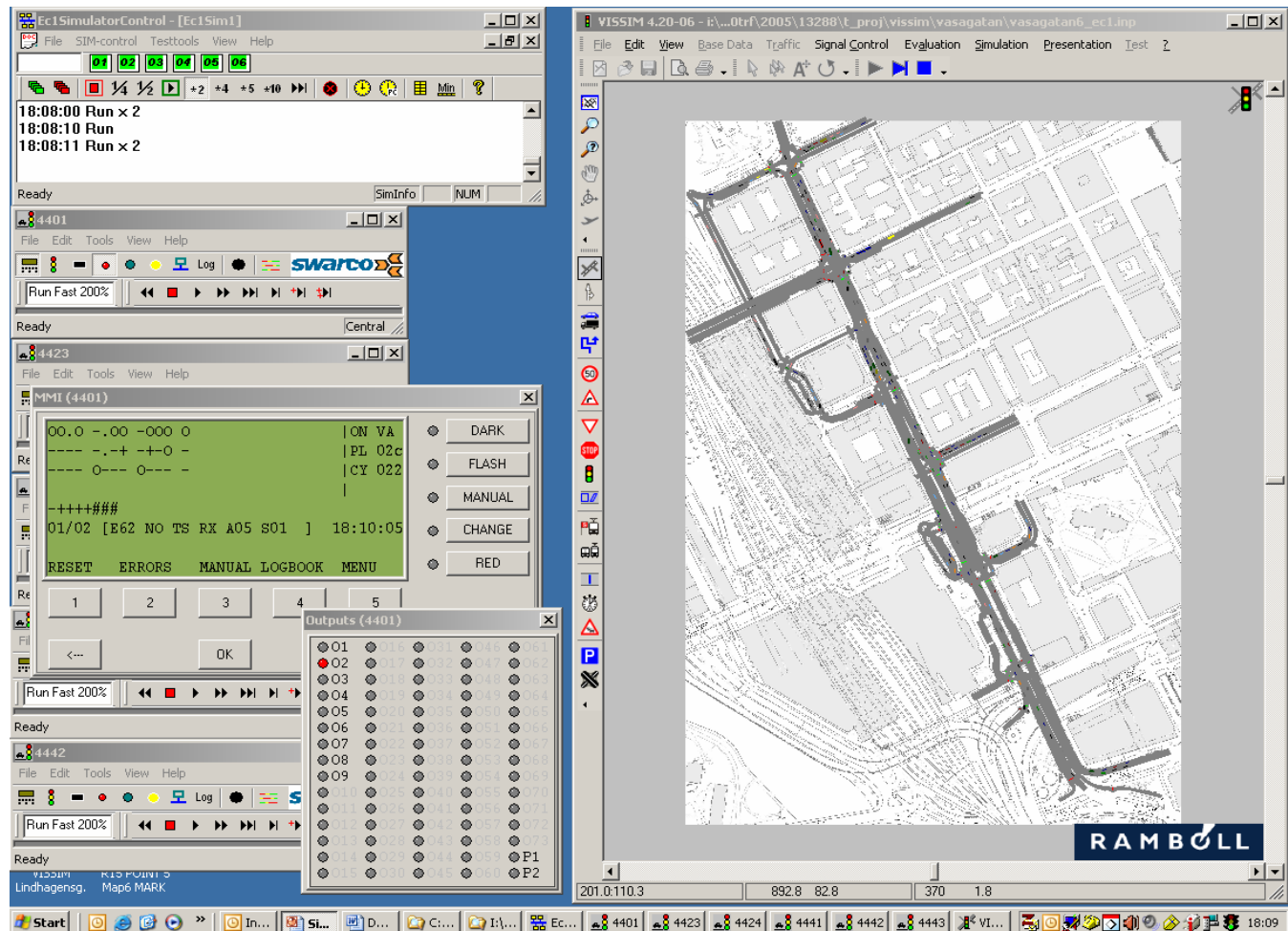
# Why not?

- More complicated than fixed time signals in VISSIM
- More problems than with VisVAP (VISSIMs own signal logic)
- No time synchronisation between EC1-simulator and VISSIM creates a lot of problems
- No communication between signal controllers (yet?) Only EC1

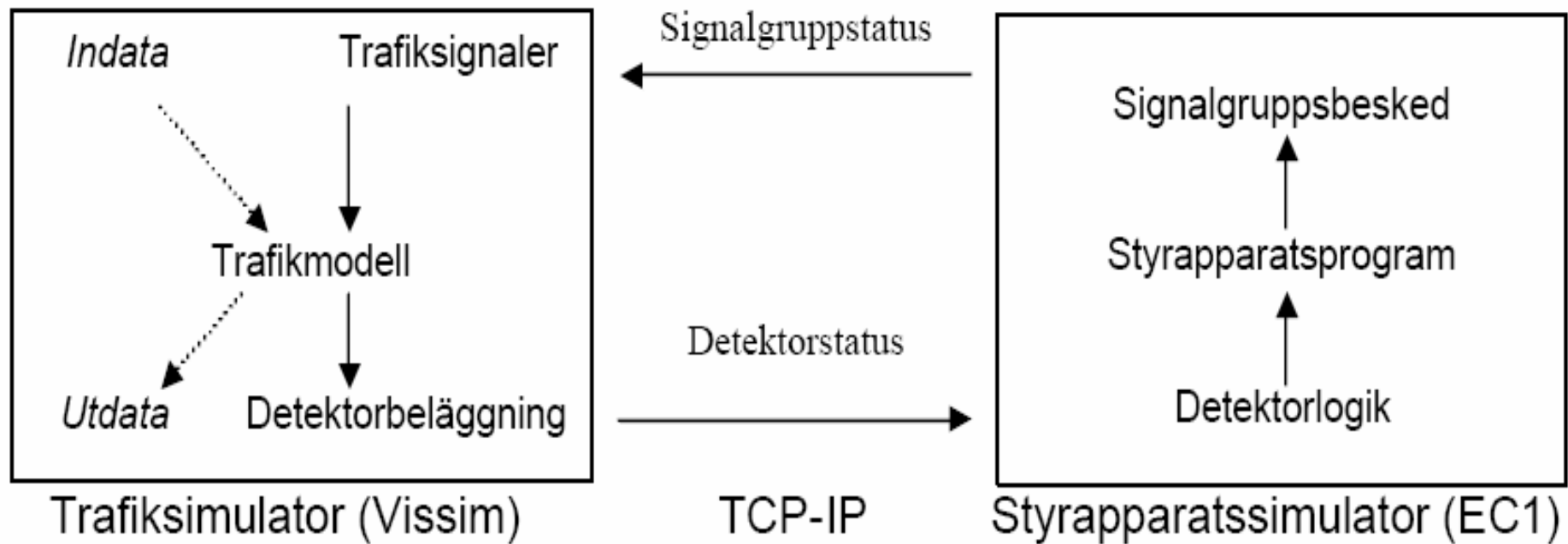
# How does it work?

- Two programs, in the same or separate computers, that communicates via TCP-IP

- Exempel: Vasagatan

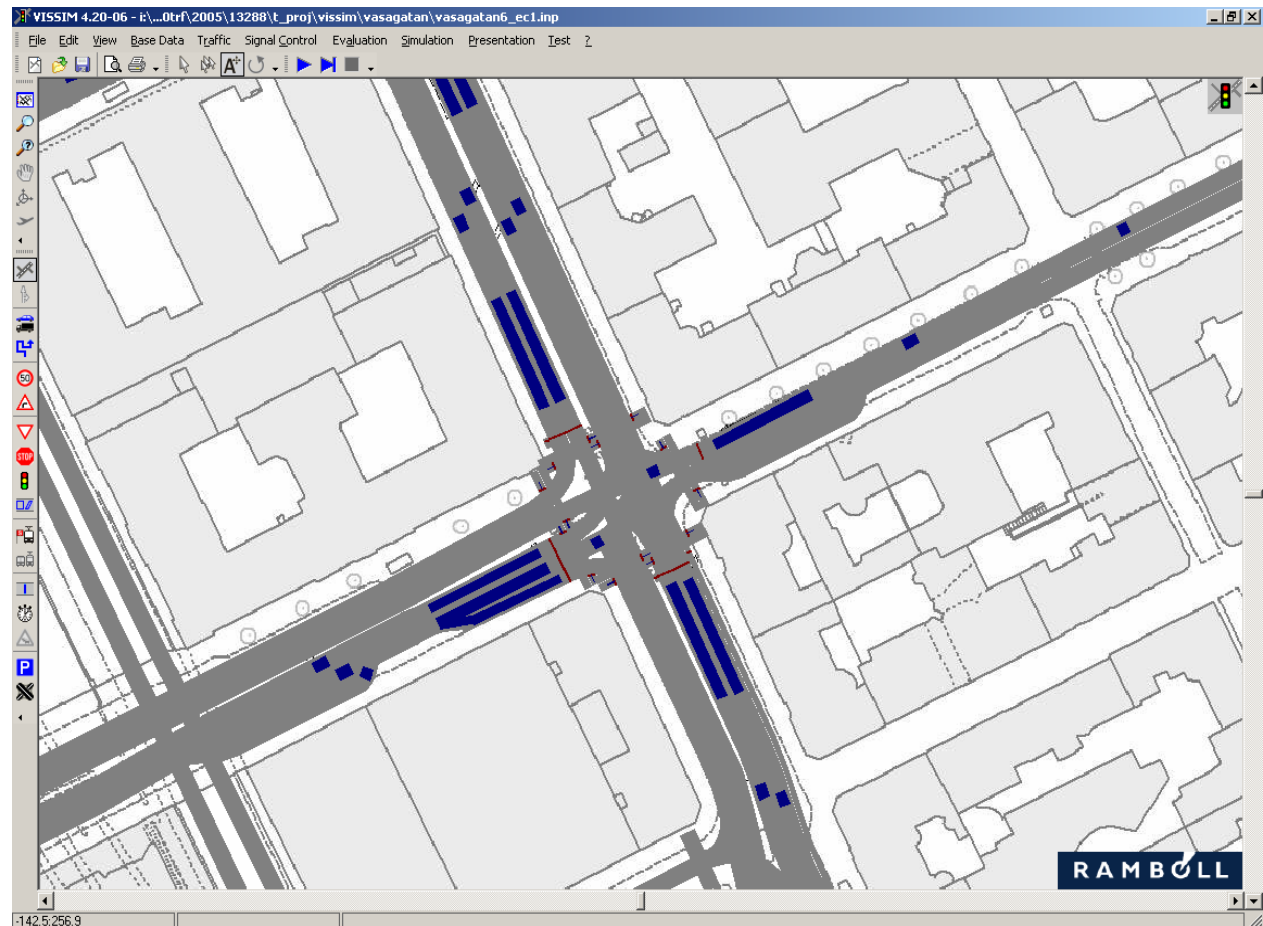


# How does it work?



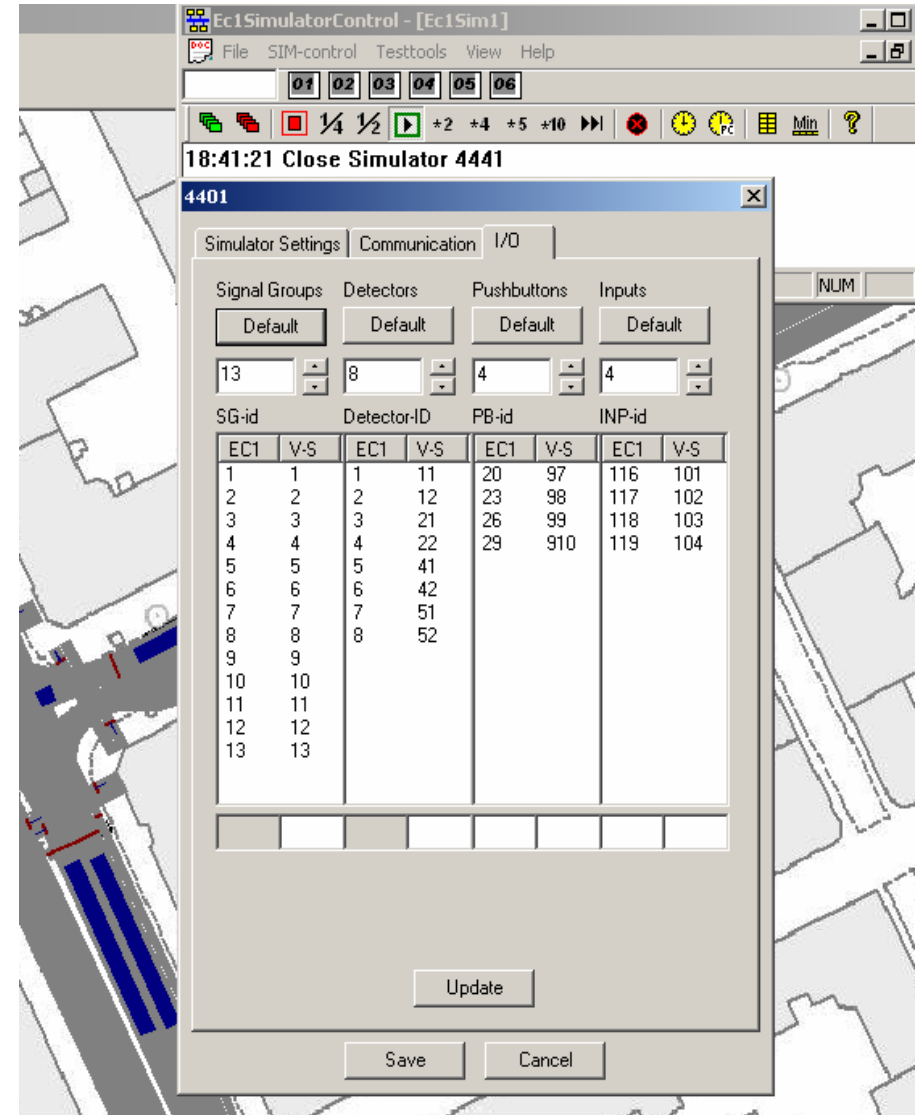
# How does it work?

- Signal heads and detectors in VISSIM is..



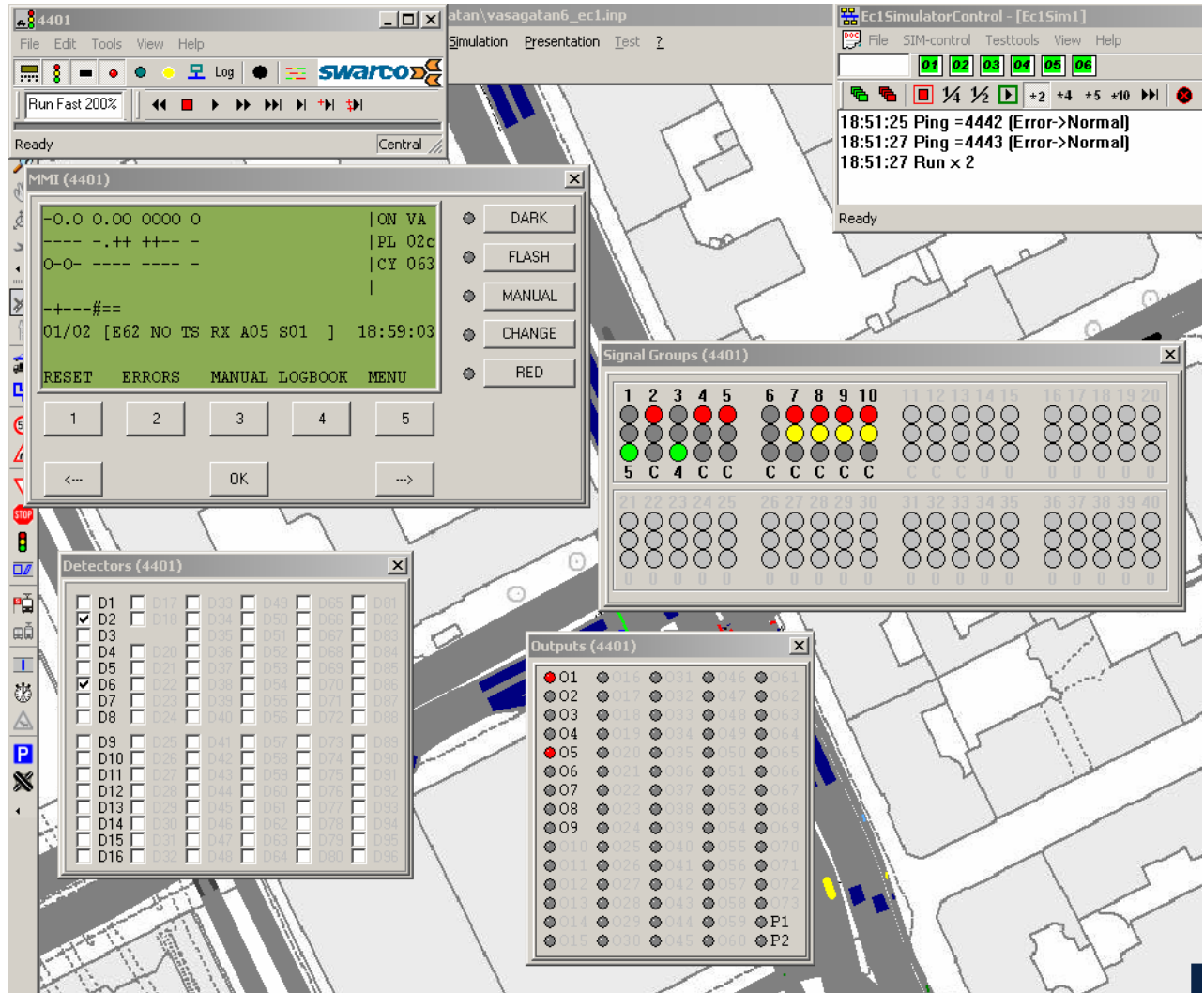
# How does it work?

- ..coupled to the EC1 controller



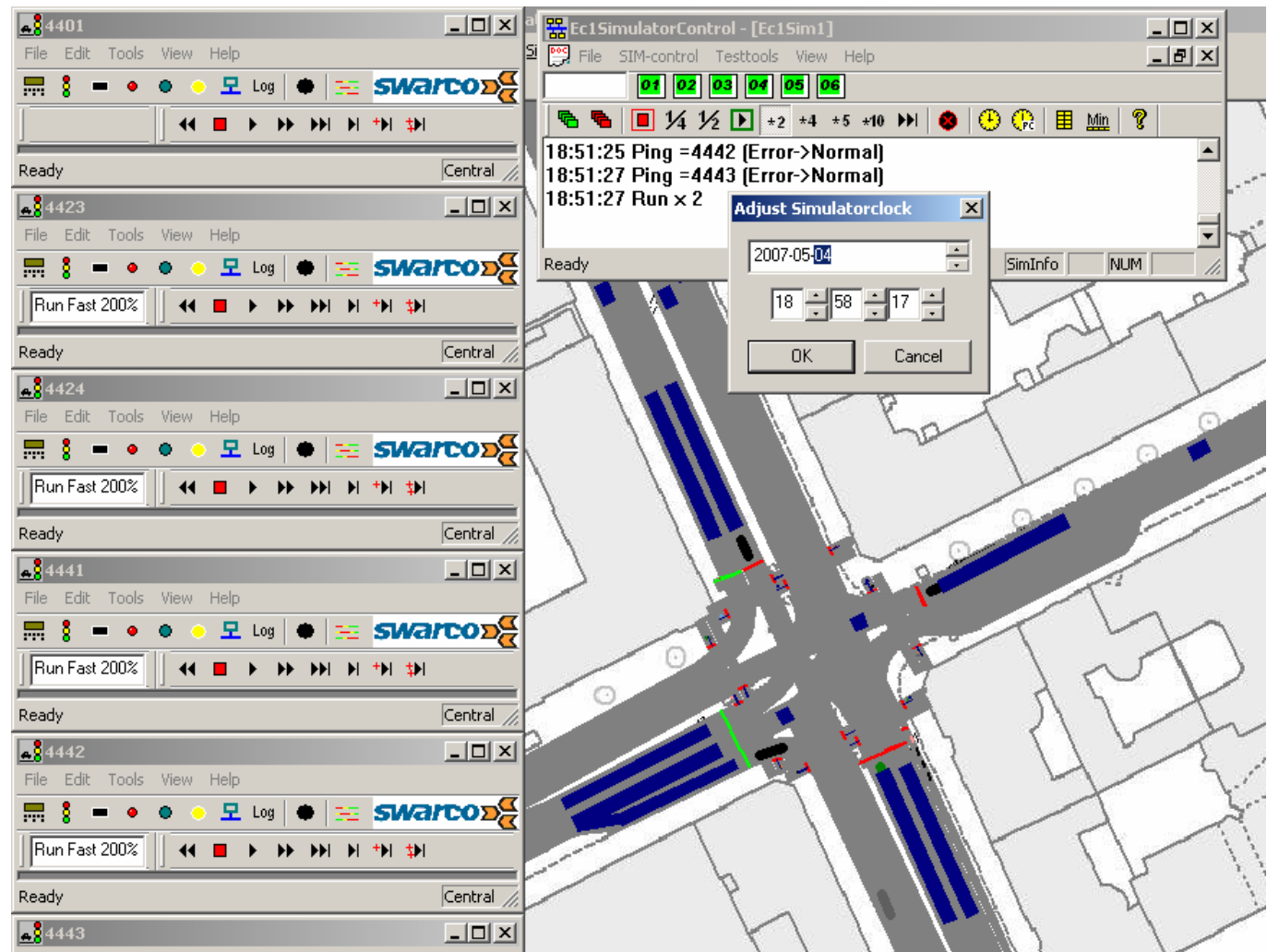
# How does it work?

- The EC1-simulator can use the programming (elc.dat file) from a controller on the street or a new programming
- Dialogs for signal group status, detectors "pilot" lamps for PRIBUSS etc.

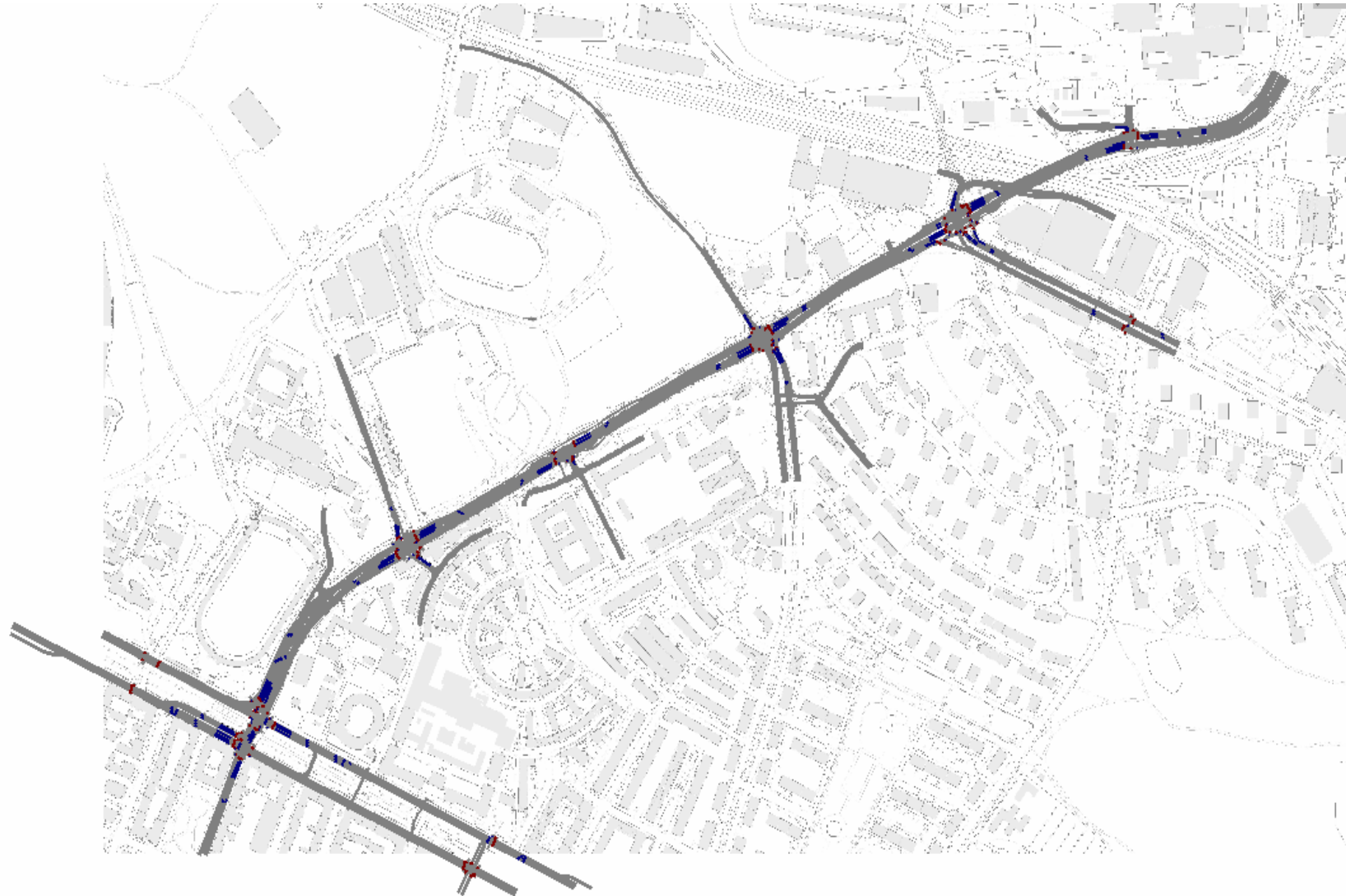


# How does it work?

- Several controllers are controlled via Ec1SimulatorControl
- The EC1-simulators are coordinated
- Simulation speeds is set separately in VISSIM and the EC1-simulator, no synchronisation

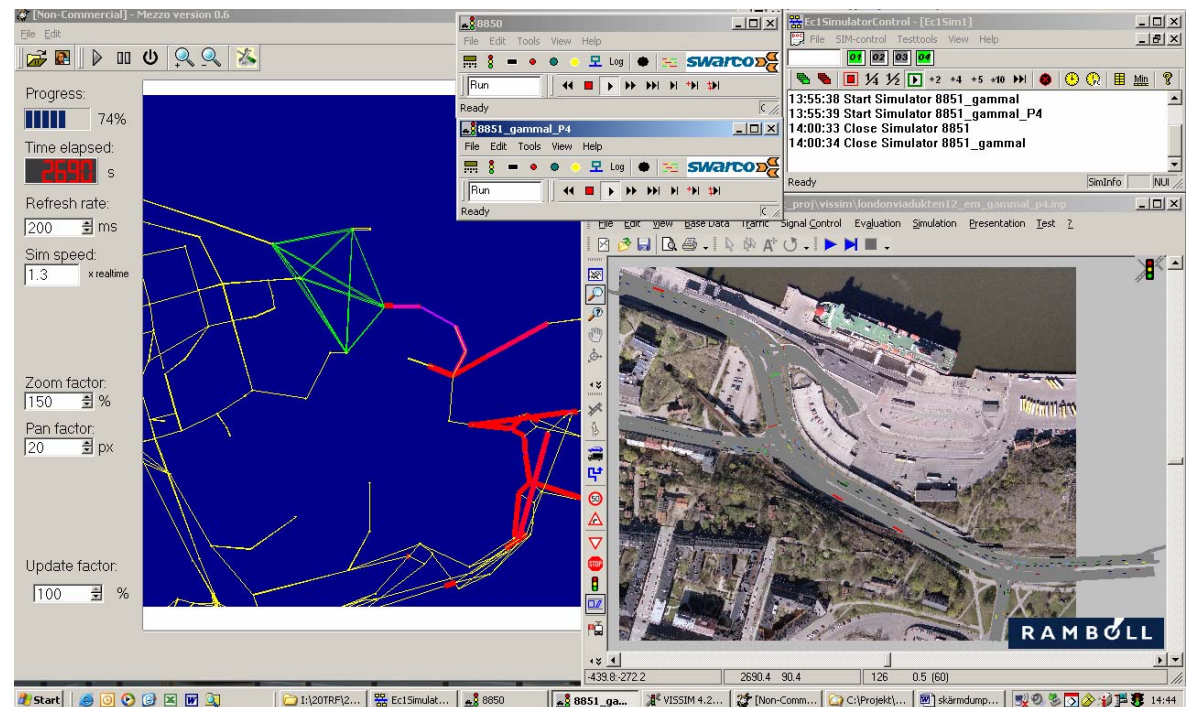


# The MATSIS project, Lidingövägen



# Future? Hybrid simulation---

- There integrated levels, mesoscopic (MEZZO), microscopic (VISSIM), and signal controller (EC1-simulator)
- Possible to study network effects of signal strategies
- Not commercial (yet...)



# The end

## ■ Questions?

- Send me a e-mail od give mee a cal if you have questions later...
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