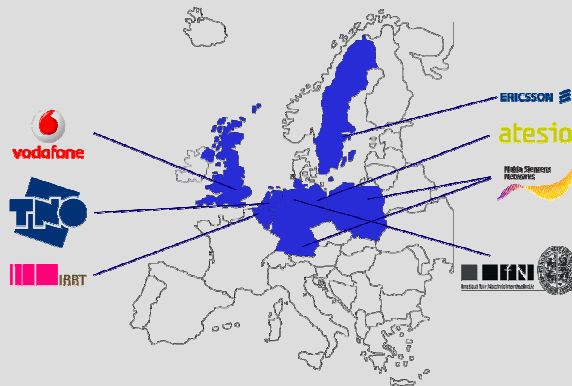


# EU FP7 STREP SOCRATES

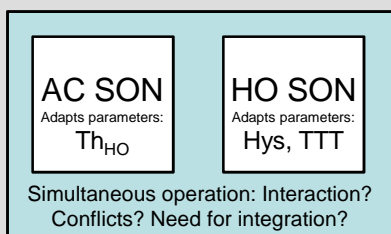
## Self-Optimisation and self-ConfigurATIion in WireLEss networkS

### Admission Control (AC) & Handover (HO) Parameter Optimisation

- Bart Sas, Kathleen Spaey, Irina Balan (IBBT)
- Kristina Zetterberg (Ericsson)
- Remco Litjens (TNO ICT)



### Use Case Goals and Approach



**Goal:** Investigate the *interaction, conflicts and need for integration* between AC SON and HO SON when deployed in parallel.

**Approach:** Simulation of scenarios where the load and/or user velocity are changed (gradually or abruptly) at a certain point in time.

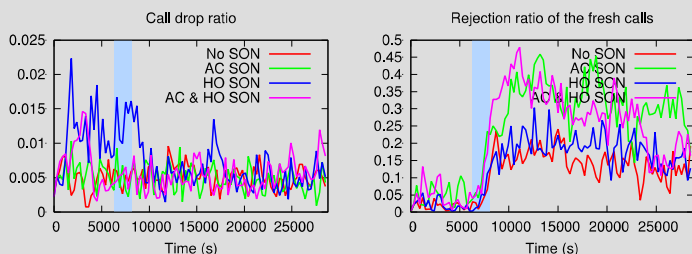
<b>AC SON</b>	X	✓	X	✓
<b>HO SON</b>	X	X	✓	✓

### Simulator/Demonstrator Setup

- Dynamic system-level simulator
- Downlink direction is simulated
- Network layout:
  - 25 cells in a 5x5 grid
  - 500 m site-to-site distance
- Propagation model:
  - Okumura-Hata for large urban areas pathloss model
  - Both auto- and cross correlated lognormal shadow fading
- Call and traffic generation:
  - 2500 users generate calls according to a Poisson process
  - Real time and non-real time traffic
- Mobility model:
  - Random walk

### Results

- AC SON:
  - Lower rejection ratio HO calls
  - Higher rejection ratio fresh calls
 } Trade off
- HO SON:
  - Lower call drop ratio
  - Higher ping pong handover ratio
 } Trade off
- AC & HO SON enabled
  - CDR improved even more
  - No effect on PPHOR
  - Mainly positive interaction



### Demonstrator – what is shown

