

Perception

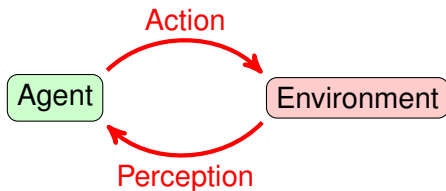
Vehicle Modelling I

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Vehicle Modelling



Modelling perception

- What is relevant?
 - Car ahead — Yes
 - Red building to the right — No
 - Car behind — Maybe
- What is available?
 - Car ahead — Yes
 - Car behind the red building — No
- Quantification
 - Distance to the car ahead
 - Speed of the the car approaching from the left
 - How precise is the driver's assessment?

Active observation and events

- Constant observation of key parameters:
 - 1 distance to car ahead
 - 2 own speed
 - 3 speed of approaching lorry
- The agent **asks** the environment
- Events can change the awareness of the situation
 - sudden blinding by the sun
 - losing grip on an icy patch
- The environment **notifies** the agent

Summary

- 1 Perception is the basis for behaviour
- 2 Agent model
 - list of information available
 - key parameters — quantitative information
- 3 The agent can ask the environment for information
- 4 The environment can notify the agent about events
- 5 Probabilities and uncertainty
 - inaccurate perception of the environment (errors)
 - semi-random behaviour