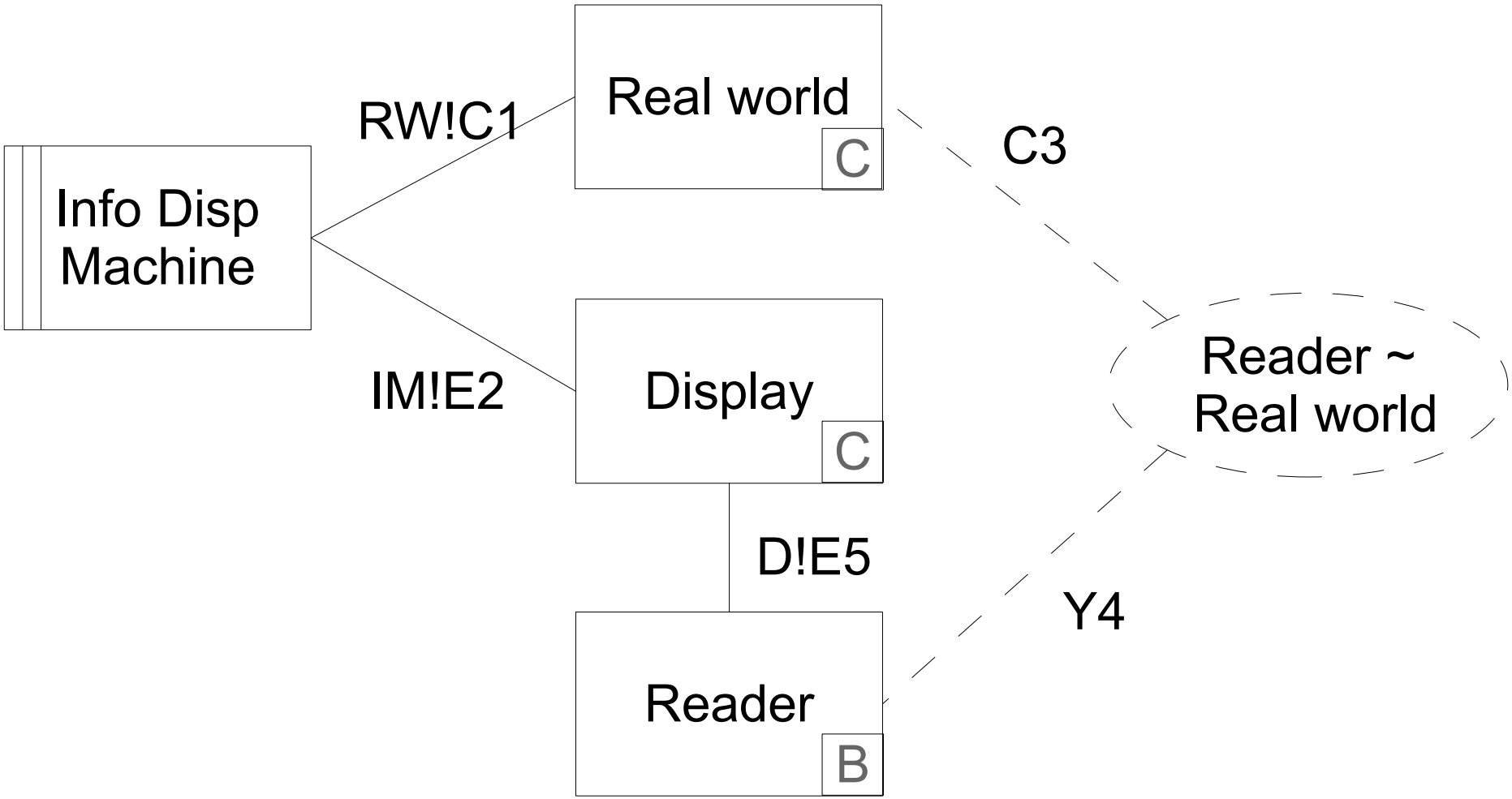
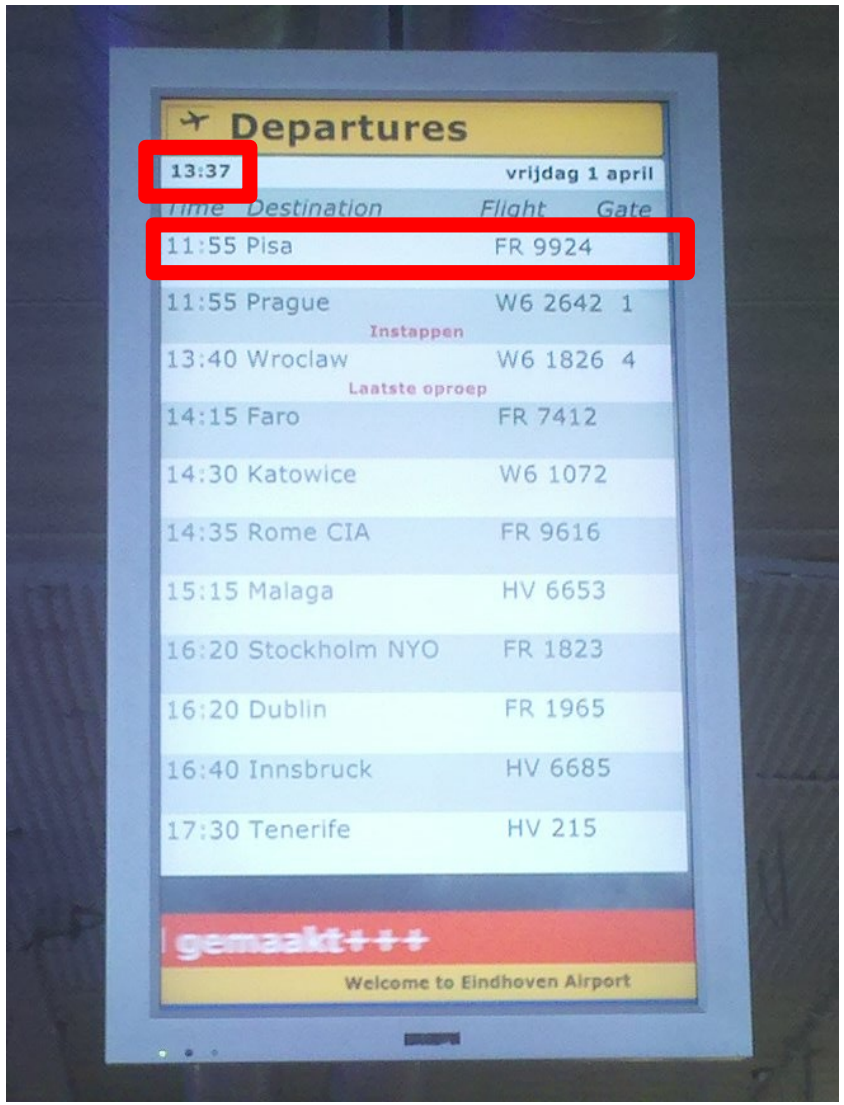
- Exercises
  - On the examples in previous lectures
  - Identifying problem frames in common problems
- Discussion
  - Case study for the course

Recent experiences with (extended) Information Display

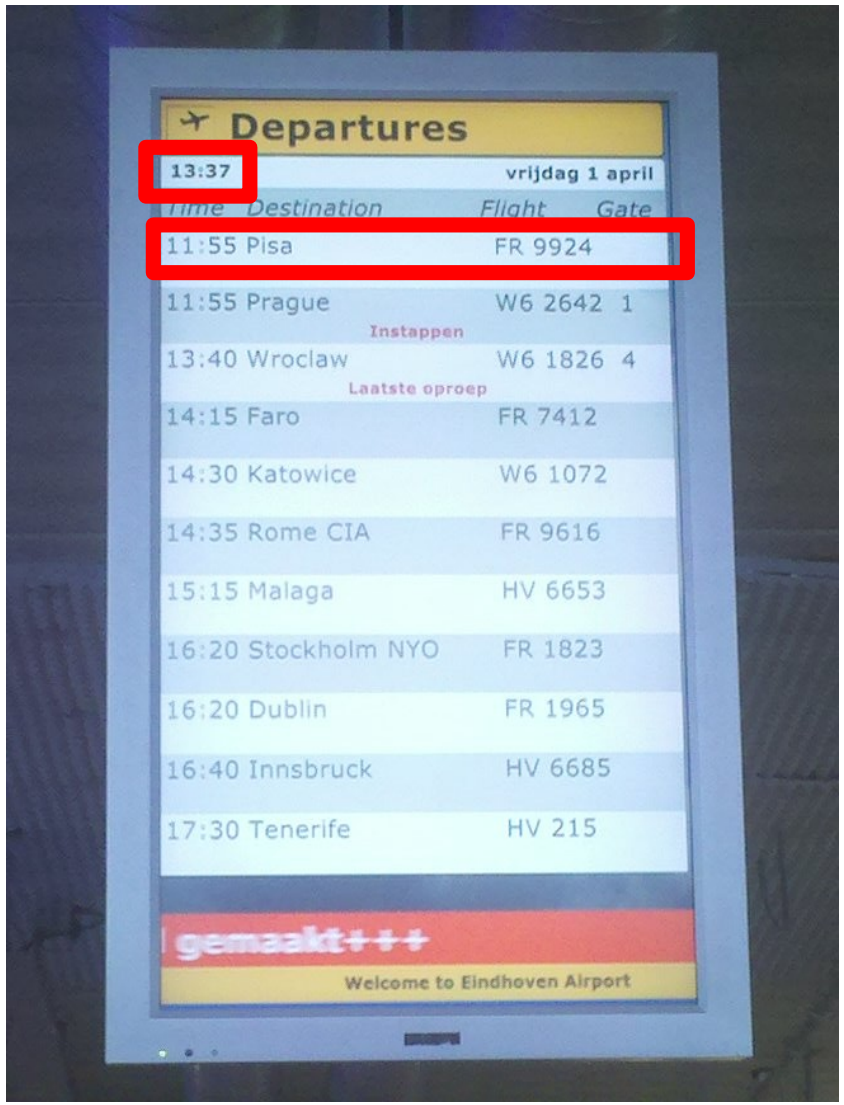


Recent experiences with (extended) Information Display



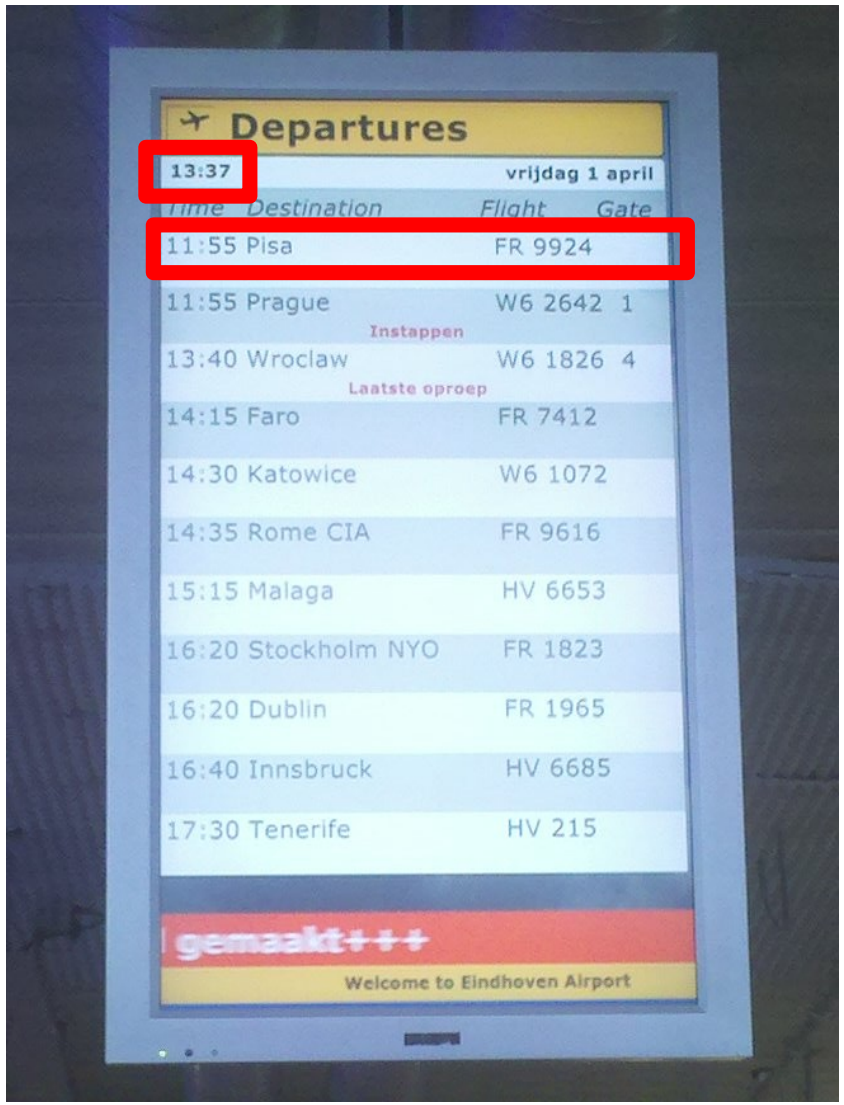
- **Reader ~ Real-word**
- BUT:
  - The **real** information about the **real** world might be unknown to the system
  - Especially when presenting **estimates**, important to give ETA of the “next update”
  - Alert Reader when new data is displayed
    - Multiple channels

Recent experiences with (extended) Information Display



- Conflicting goals among stakeholders
- Airport
  - Wants to provide information **for the efficient dispatch of passengers**
  - Wants to avoid protests and disturbances
- Passenger
  - Wants **accurate reporting** and honest forecasts

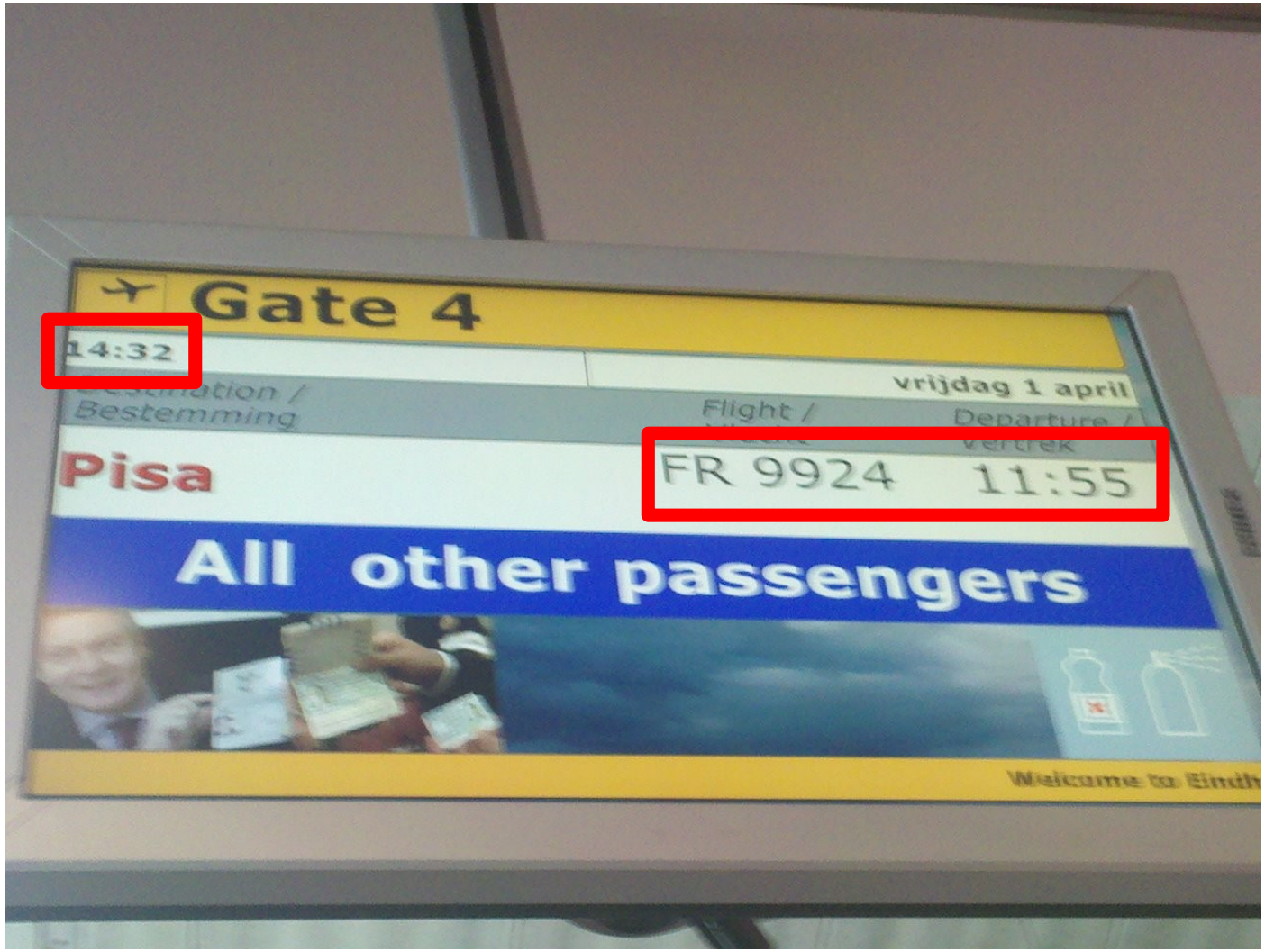
Recent experiences with (extended) Information Display



- Conflicting goals among stakeholders
- Airline
  - Wants to avoid loosing passengers to other means of travels (= **reassurance**)
  - Wants to **avoid penalties** linked to excessive delays
- Developer
  - Wants to accommodate **all** the various needs

Recent experiences with (extended) Information Display

- All parties comfortable with downplaying unpleasant info (**denial**)
- Compare: IE progress bar

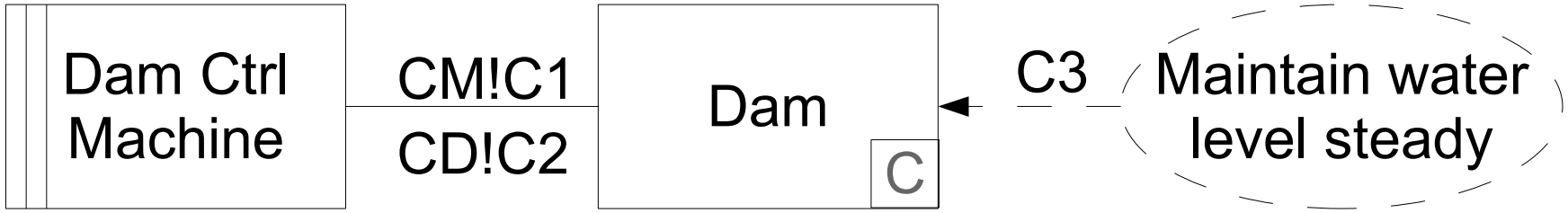


Recent experiences with (extended) Information Display

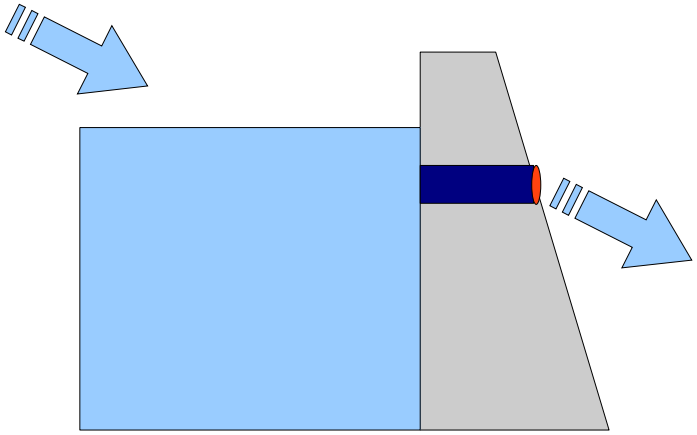
- Once “out of the system”, no need to downplay
- Passenger's goal somewhat satisfied
- *Home sweet home!*

Exercise (Controlled behaviour)

- Can you write formally S, D and R for the dam example and satisfy the concern?



C1: OpenGate, CloseGate
C2: SensorReading
C3: WaterLevel

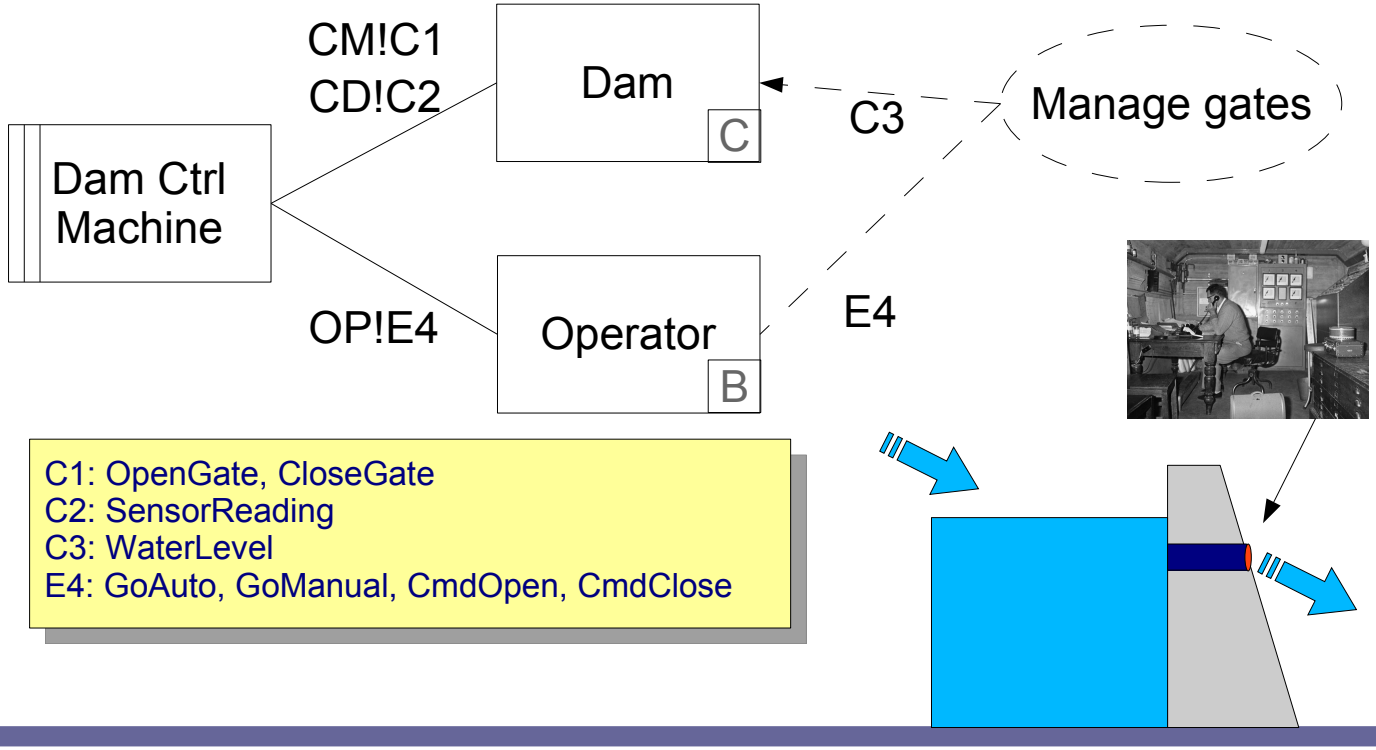


Exercise (Controlled behaviour)

- Assume now that DM is linked to the actual dam through a connection domain
- Identify properties that the connection domain must satisfy so that the correctness argument still holds
- Consider several common implementation technologies for the connection domain, and discuss their properties as above

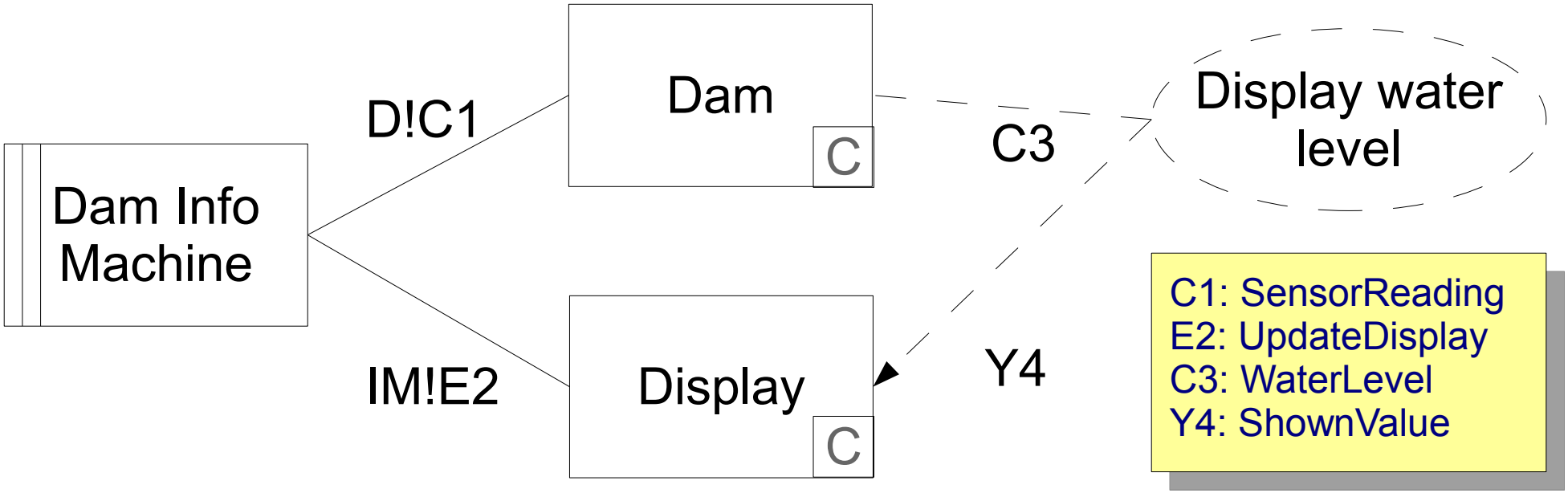
Exercise (Commanded behaviour)

- Can you write formally S, D and R for the dam example and satisfy the concern?
  - A little more complex, try it offline



Exercise (Information display)

- Describe and prove the correctness concern for the Dam display problem
  - You will need to write R, D and S
  - What can be learned about risks with the dam?



Exercise (Simple Workpiece vs. Commanded Behaviour)

- If Commanded Behaviour and Simple Workpiece are so similar, why are they two distinct frames?
- Spot the differences!

Planning session

- Order of business
  - Choosing a suitable sample problem
  - Sketch a distributed application solution
  - Discuss implementation options
  - Select technologies
  - AoB