



Claus B. Madsen, CVMT/AAU

SOMETHING ABOUT BOXES...



SPRING 1989

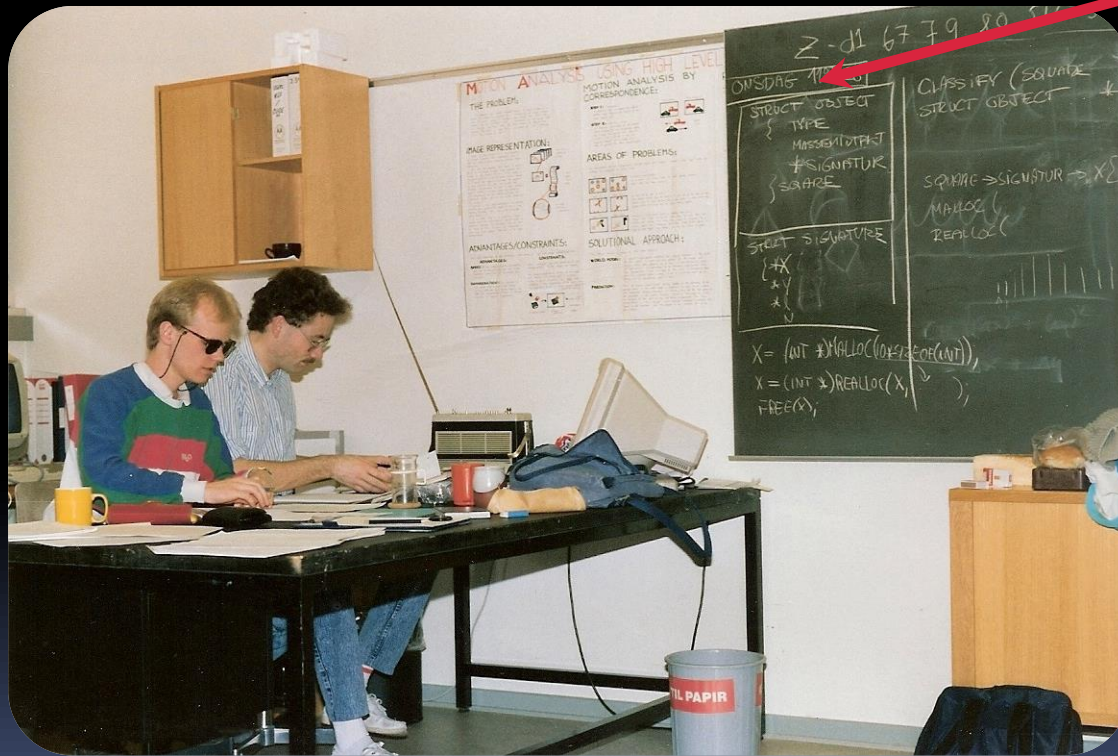
- First semester of the "Civilingeniør" study in "Medico-teknik og Billedanalyse"
- Plan: one semester "billedanalyse", then specialize for a year in "medico-teknik", then work for a company "saving the world" and making a lot of money
- Erik proposes: work on robotvision project and get chance to go to US in the fall...

Put-in-box robot




Erik as supervisor

Meet EG, Wednesday 11 o'clock






Erik with professor traits

- Glasses in holder around the neck
 - Pen that could write in three colors (pencil, ballpoint blue, ballpoint red)
 - "Slippers"
 - Leather west
 - Arrived late, left very late
- 



Erik as “family father” for the lab

- Relaxed attitude
 - “Open door” policy ... with moderation 😊
 - Keen on festivities
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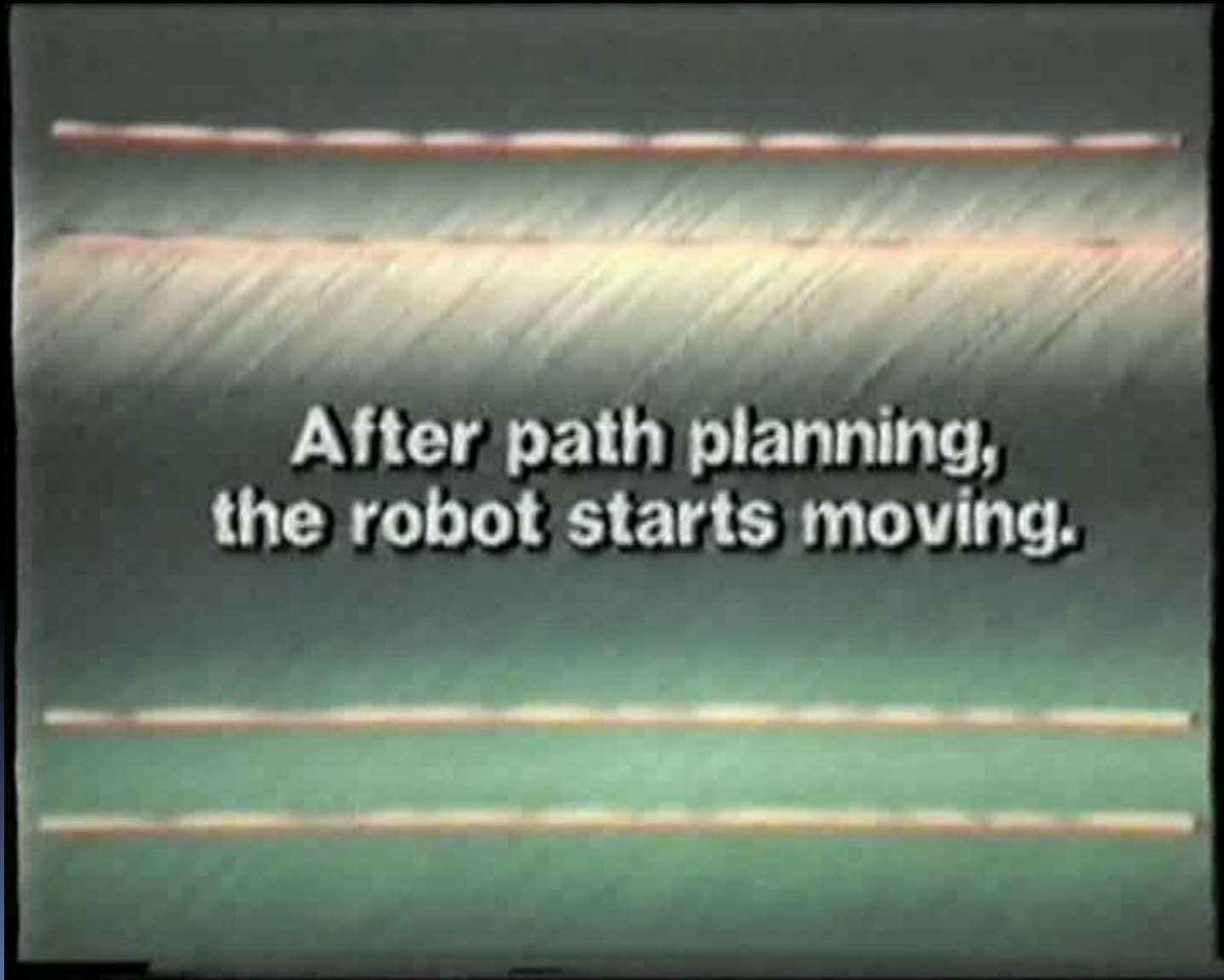
Summer 1989



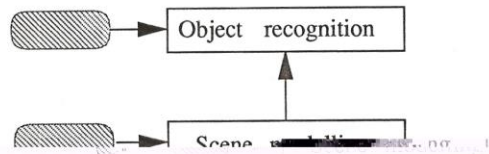
Were we a little too relaxed?



Mobile robot, Knoxville, Tennessee



Modular vision systems 1990 - 1994



Key words characterizing this period:

Vision philosophy (active vision, purposive vision,...)

Systems

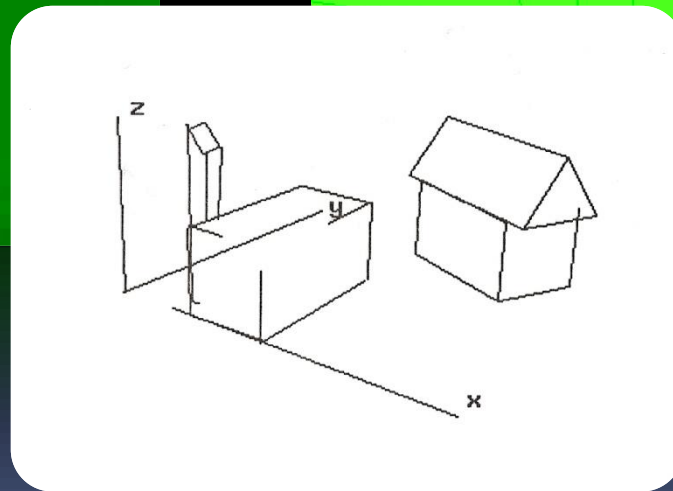
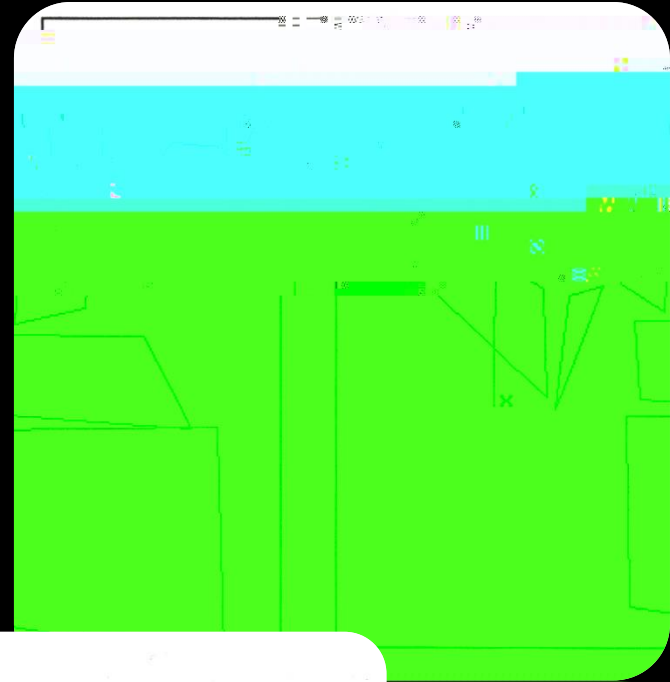
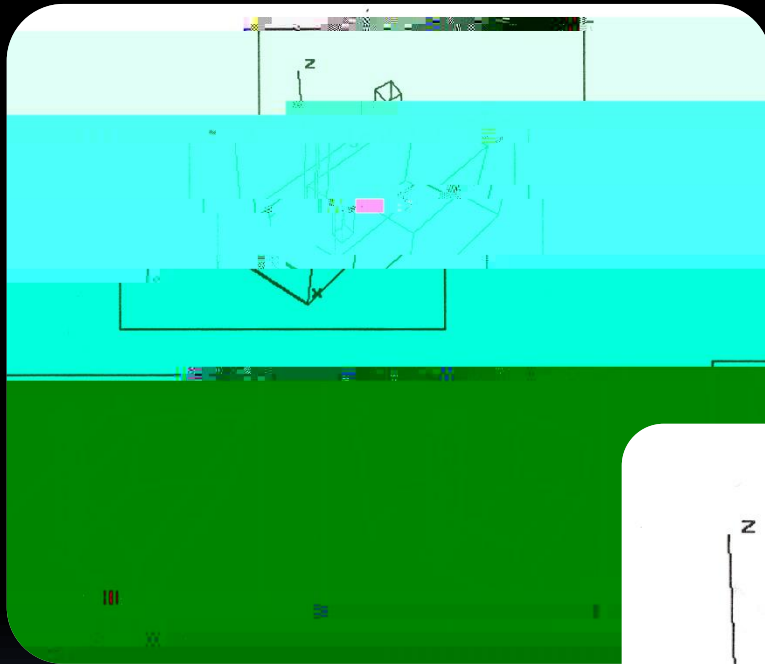
Sequences

High level reasoning

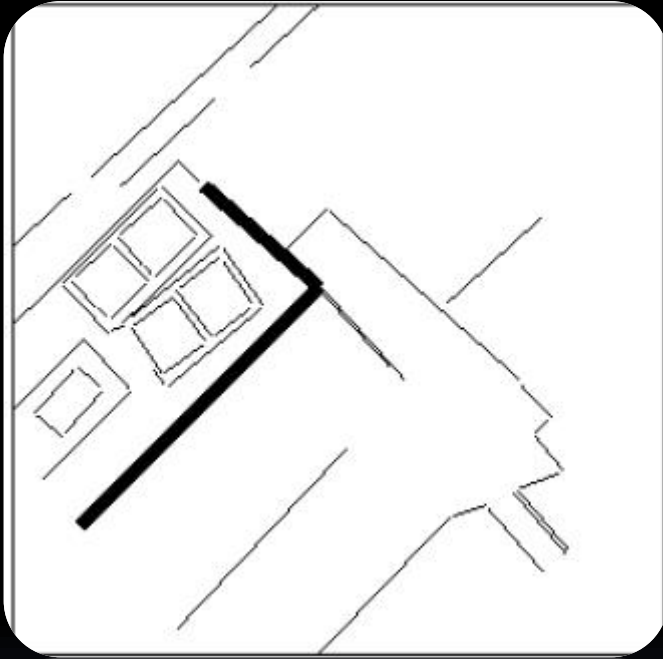
Region of interest

Qualitative

Blocks' (Box) World



I got Ph.D. in measuring angles ☺



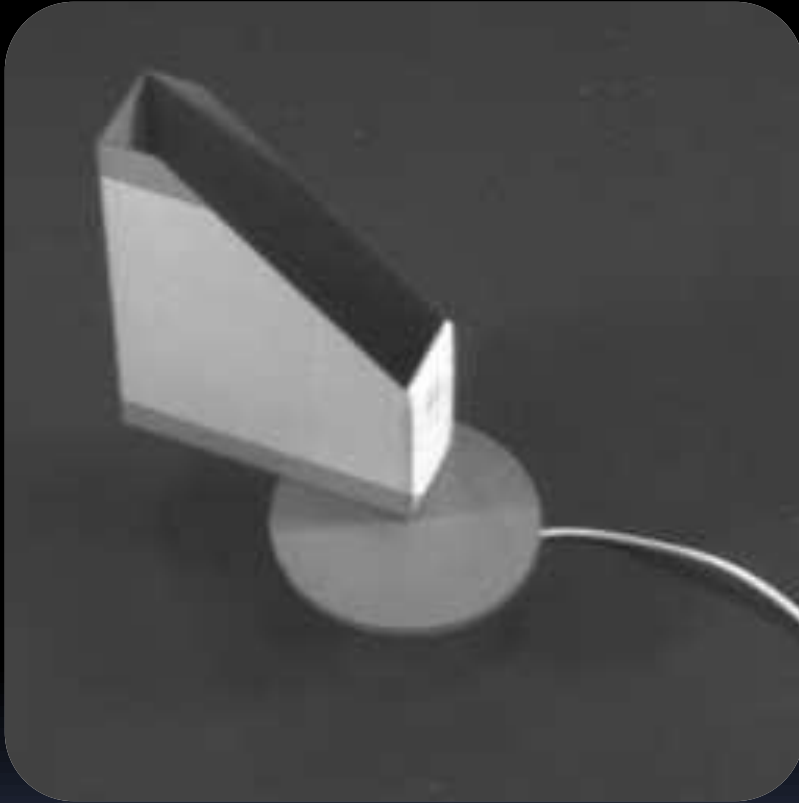
My thesis advisor was Henrik Iskov Christensen, and I was his first Ph.D. "child". Henrik was Erik's first Ph.D. child.

Henrik is now robotics chair at Georgi Institute of Technology

Autumn 1994



Spring 1996



Grey level *REAL* box world ☺

1995 - 1999



Behaviour based robotics


Vision for navigation



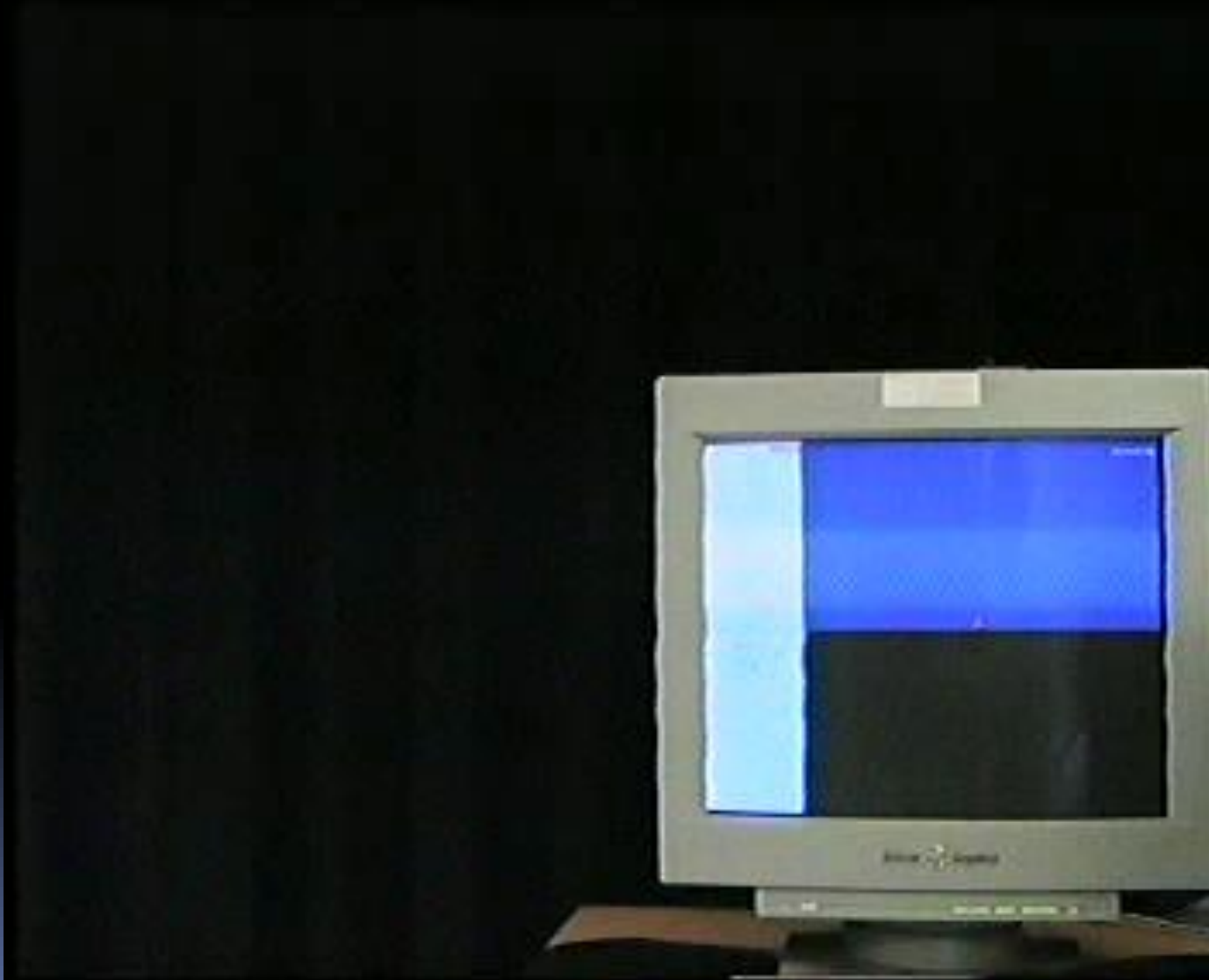
The EG lunch box 😊



The interest in virtual reality

- We believe in behaviour-based robotics...
 - We have all the right ideas, the real world is just a little too complicated...
 - What about *virtual* robotics?
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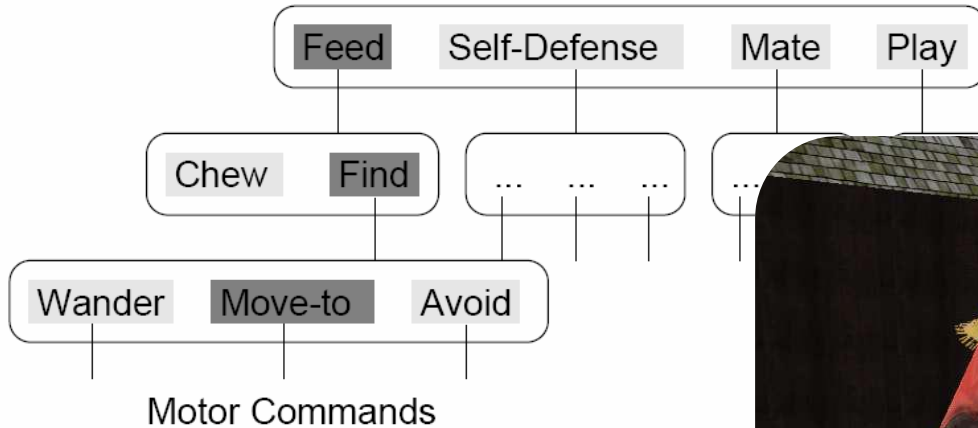
Summer 1998



Backup in case video doesn't work



Puppet 1998 - 2001



Motor Commands

Characterizing words:

- Behaviours
- Emergence
- Sense-plan-action
- Reactive
- Agents



A Puppet anecdote

The proposal writing/submission crunch...

Puppet



Two important boxes...



BENOGO 2002 - 2005

- Photoreal virtual reality
- Getting the world "into the box"
- We were again really, really enthusiastic
- The proposal writing was gruelling (Erik had the flu)

BENOGO video




The BENOGO box





Post BENOGO

- I really, really knew what I wanted to work with
 - You invested yourself in the Ballerup campus and the multi-campus institute
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Colors, real-world, outdoor...



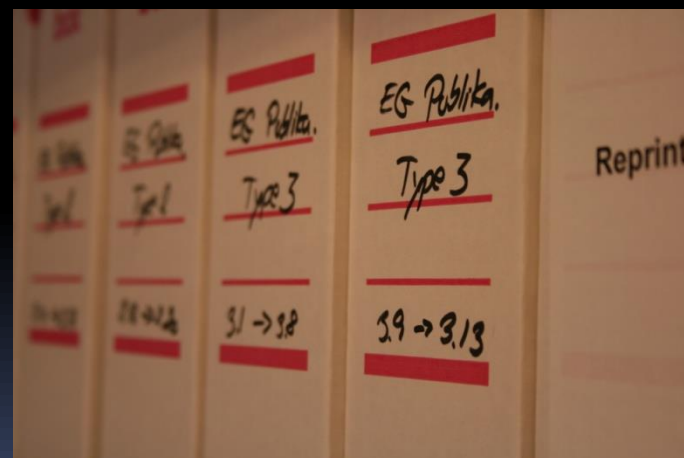
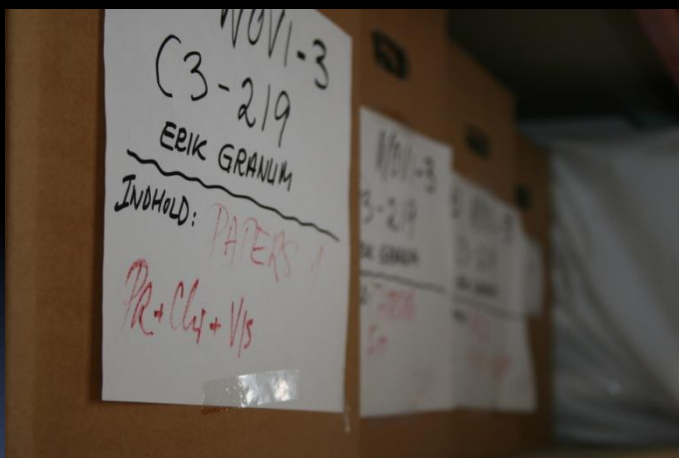
Box world is dead

Philosophies are dead?

Systems, model-based,
real-time,...

The future?

- Som vi siger på jydsk: dit "barn" er godt i vej!
- Du efterlader en arv som er uendeligt meget mere end blandede kasser



The sand box metaphor





Thanks...