MAOP

Exercises

Summer School on AI for Industry 4.0
Saint-Etienne 2020

Inference

- What is printed?
- Use a rule
- Find all solutions for the plan context
- Ask another agent for some beliefs, if necessary (implementing memoization)

```
b(10).
b(20).
p(15).
p(25).

!bt.

+!bt
   : b(X) &
     p(Y) &
     X > Y
   <- .print(X).
```

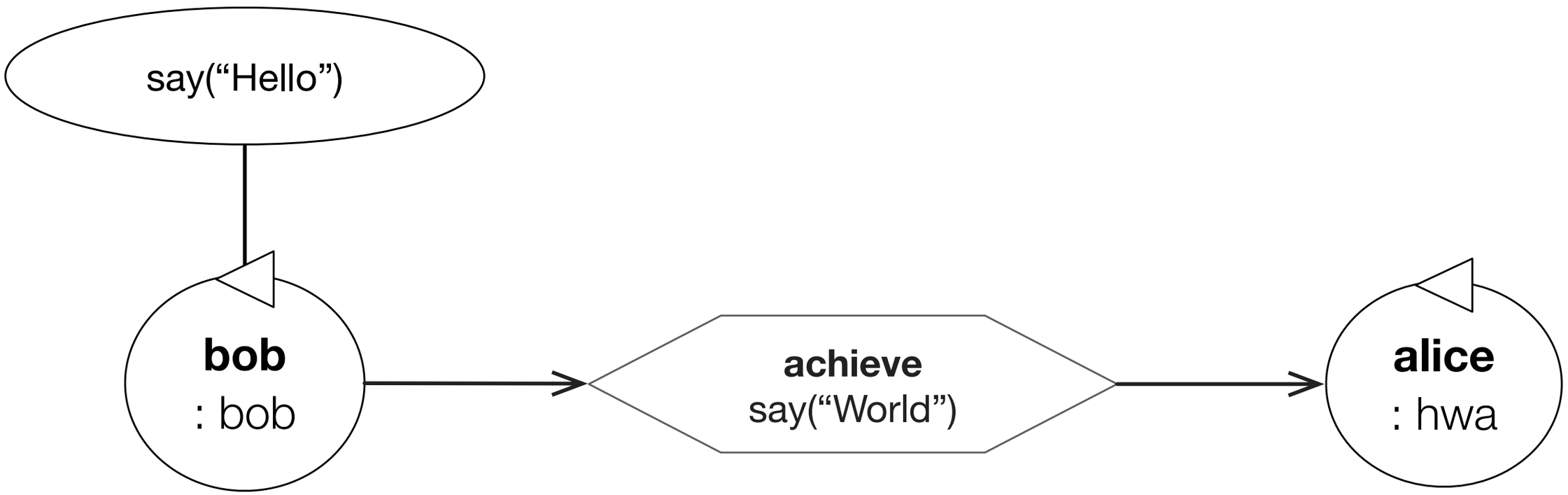
Coordination

- Two agents, Bob and Alice, have to print out

  Hello World

- Bob have to print “Hello” and
  Alice “World”

- Use communication for coordination


say(“Hello”)
bob
: bob
achieve
say(“World”)
alice
: hwa

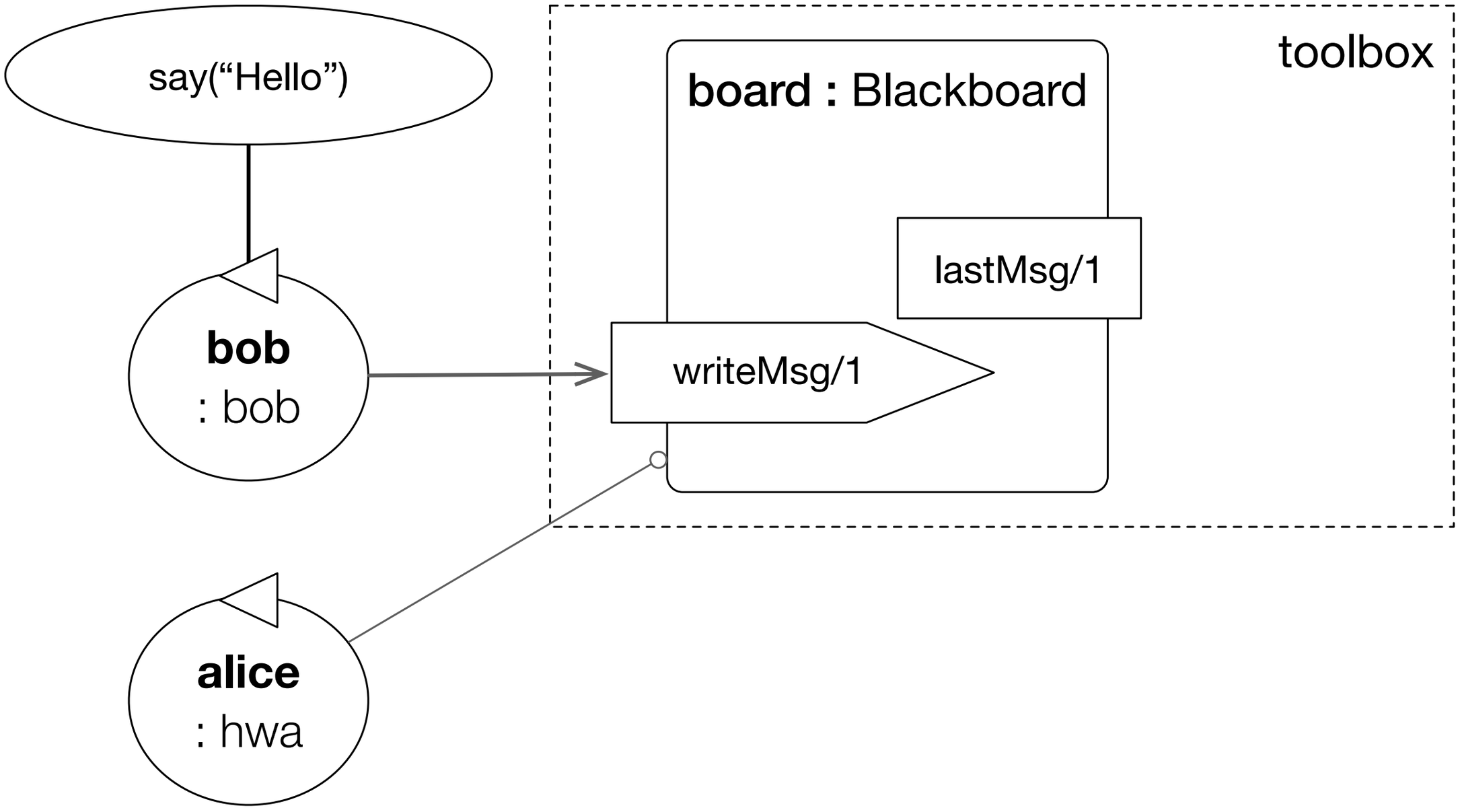
Characteristics

- agents have to know each other
- can be complex for several agents
- not easy to implement complex dependencies

Environment Hello World

- We have an artifact where to print, that notifies agents about what is being printed

- Bob & Alice can interact only with this artifact! (loosely coupled)


say(“Hello”)
bob
: bob
alice
: hwa
toolbox
board : Blackboard
lastMsg/1
writeMsg/1

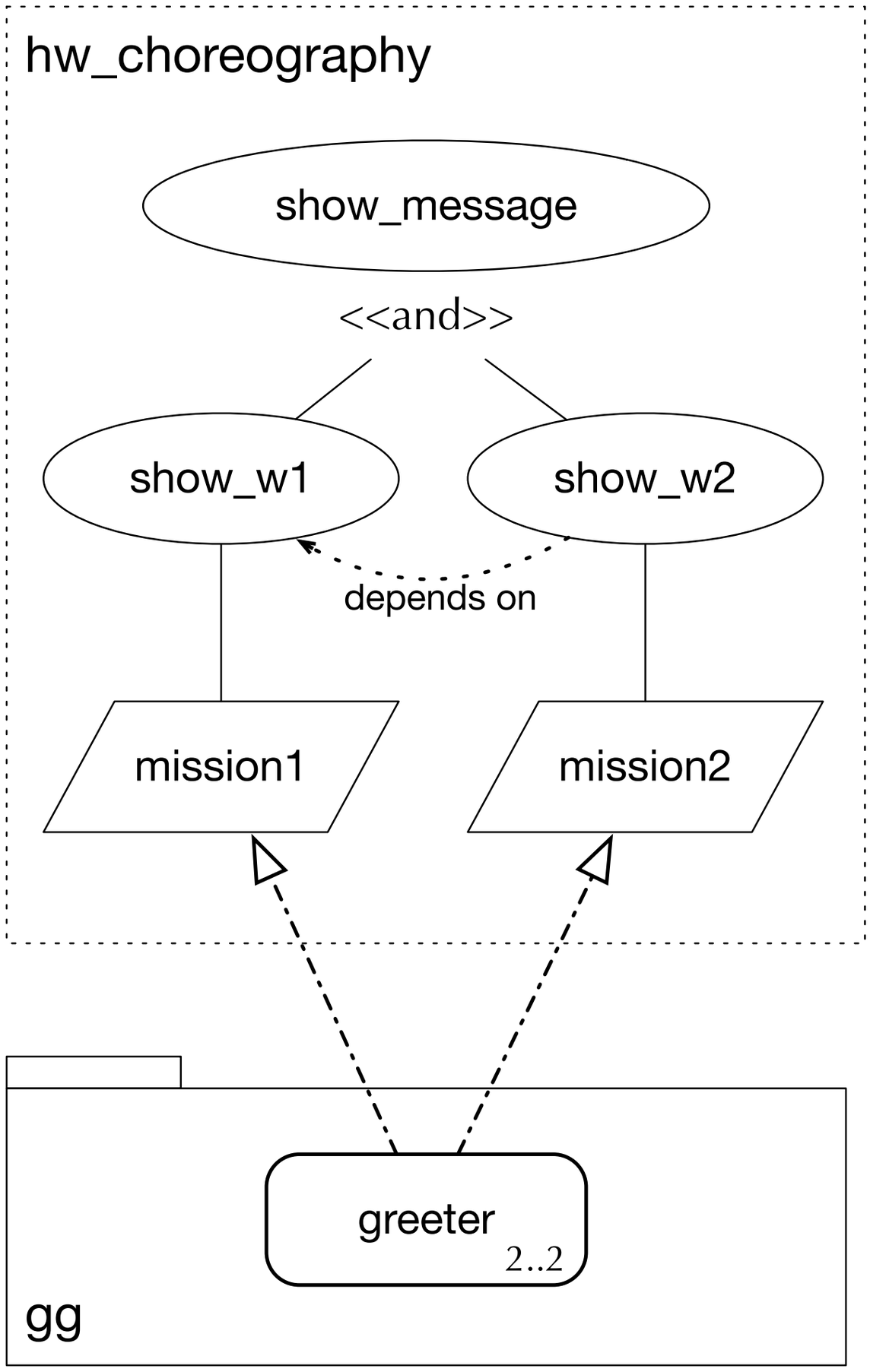
Characteristics

- agents do not need to know each other

- not easy to implement complex dependencies

Organised Hello World

- We have a scheme with goals assigned to Bob and Alice


hw_choreography
show_message
<<and>>
show_w1
show_w2
depends on
mission1
mission2
greeter
2..2
gg

Exercises

- Change its application to print

World Hello

- and measure the effort for that