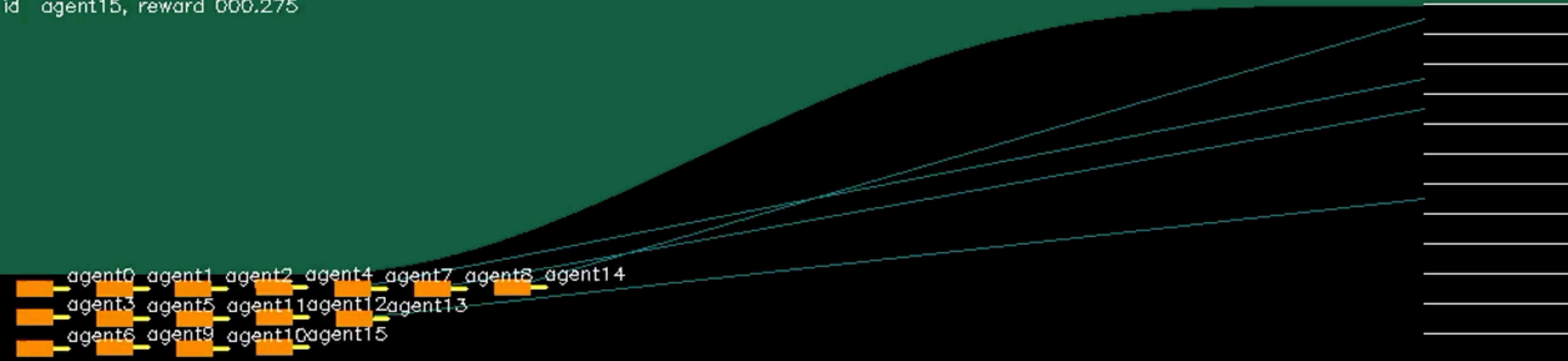






Emergence of “intelligent behaviors”

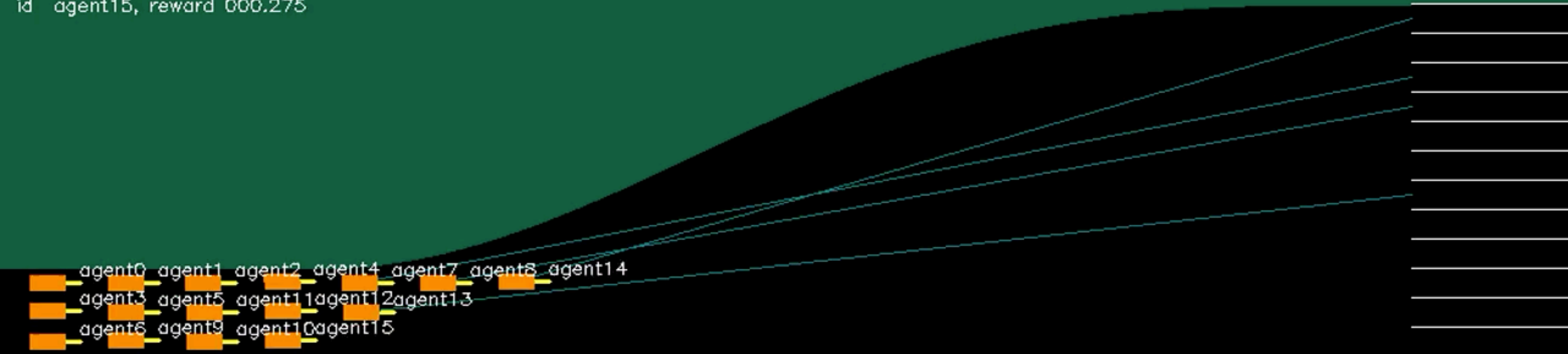
id agent0, reward 000.047  
id agent1, reward 000.235  
id agent2, reward 000.479  
id agent3, reward 000.357  
id agent4, reward 000.604  
id agent5, reward 000.067  
id agent6, reward 000.398  
id agent7, reward 000.538  
id agent8, reward 000.528  
id agent9, reward 000.503  
id agent10, reward 000.535  
id agent11, reward 000.462  
id agent12, reward 000.044  
id agent13, reward 000.375  
id agent14, reward 000.440  
id agent15, reward 000.275



PPO-0409-2 20-iters

- At 20th iteration
- Randomly drive.
- With slightly constrained directions.

id agent0, reward 000.047  
id agent1, reward 000.235  
id agent2, reward 000.479  
id agent3, reward 000.357  
id agent4, reward 000.604  
id agent5, reward 000.067  
id agent6, reward 000.398  
id agent7, reward 000.538  
id agent8, reward 000.528  
id agent9, reward 000.503  
id agent10, reward 000.535  
id agent11, reward 000.462  
id agent12, reward 000.044  
id agent13, reward 000.375  
id agent14, reward 000.440  
id agent15, reward 000.275

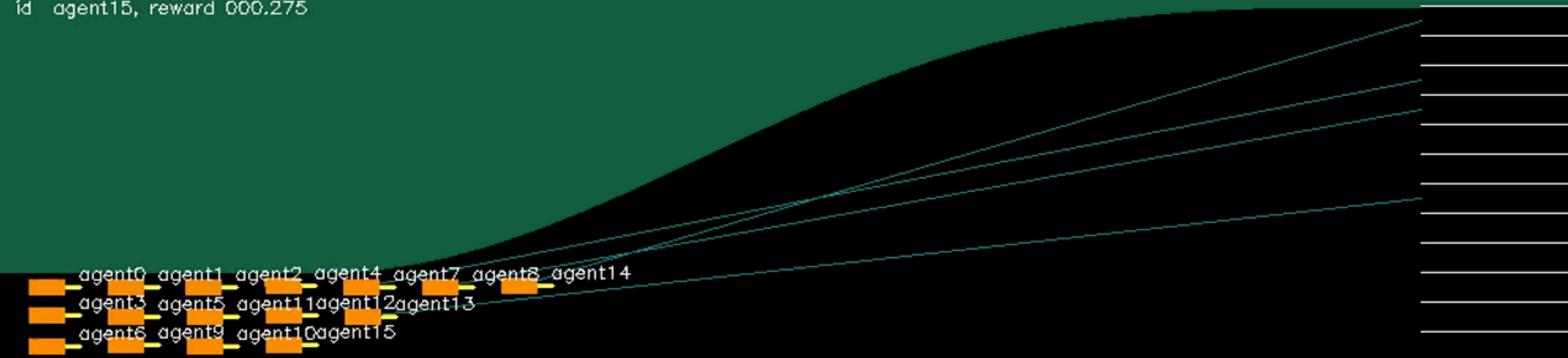


PPO-0409-2 20-iters



# Emergence of “intelligent behaviors”

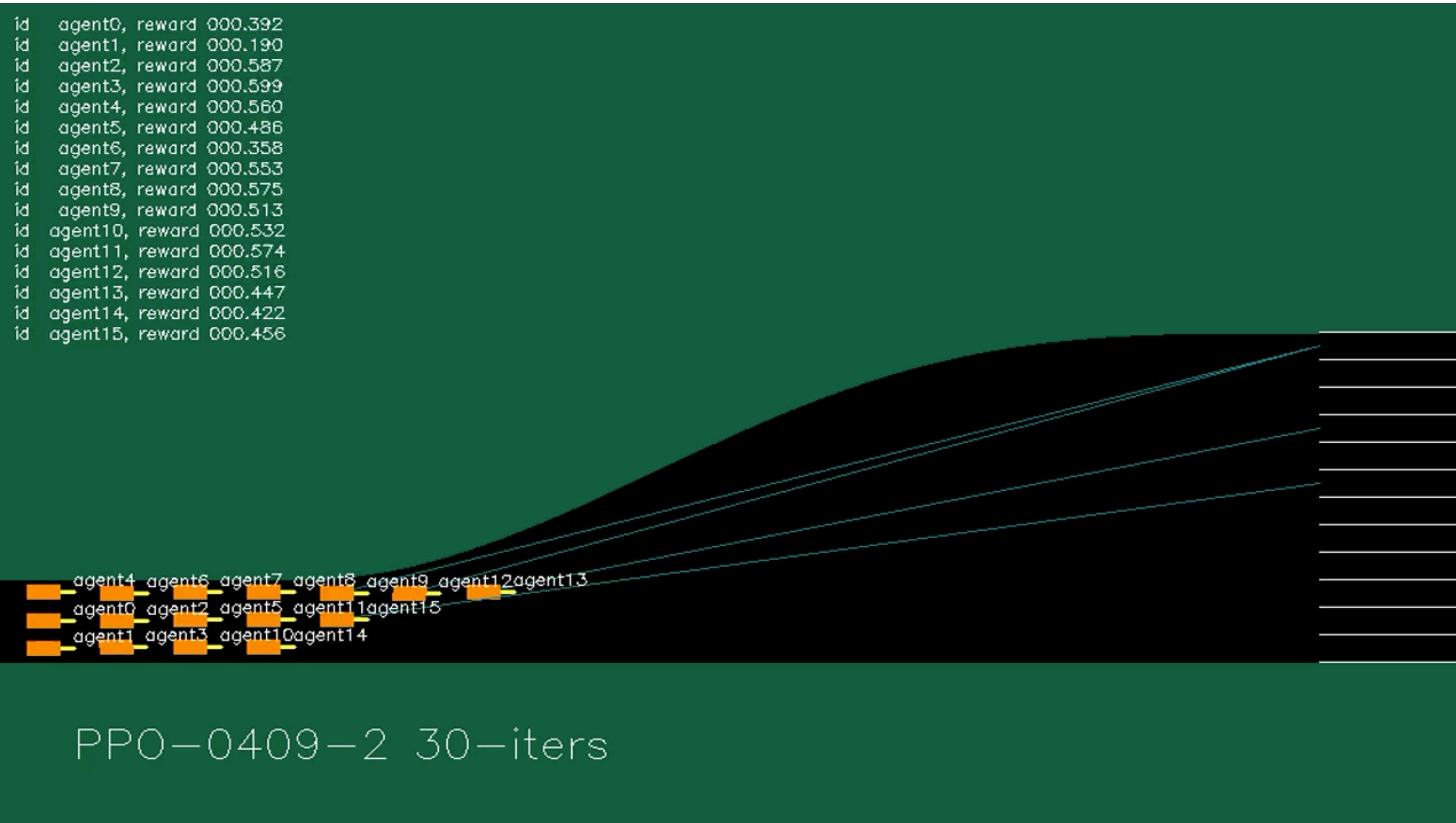
```
id  agent0, reward 000.047
id  agent1, reward 000.235
id  agent2, reward 000.479
id  agent3, reward 000.357
id  agent4, reward 000.604
id  agent5, reward 000.067
id  agent6, reward 000.398
id  agent7, reward 000.538
id  agent8, reward 000.528
id  agent9, reward 000.503
id  agent10, reward 000.535
id  agent11, reward 000.462
id  agent12, reward 000.044
id  agent13, reward 000.375
id  agent14, reward 000.440
id  agent15, reward 000.275
```



PPO-0409-2 20-iters

- At 20th iteration
- Randomly drive.
- With slightly constrained directions.

# Emergence of “intelligent behaviors”



- At 30th iteration
- Regularly drive.
- Learning how to line up and deceleration.
- But easy to collide front vehicles who decelerating.