report

1. project description:

somehow like a postman send the packages to the destinations or amazon roboters

a epuck will follow the line in the map, detect the atificial road, city map with different blocks,

the map have many crossroads

the map will be given previously,

e peck will find the optimal route to destination

we shall add some obtascles in the future.

2. model:

action: trun right, turn left, turn right, forward, backward(转的时候要掉头，不能直接向后转)

states: different crossroads 5-10 states

reward: when the epuck arrives at the destination, it will get 10 points, the another states are 0.

3.how to judge which state epuck is:

solution 1: use the under sensor to scan the "光电黑白编码" on the road in oder to know which 'road' the Epuck is.

solution 2: use the front cmos camera to do some pattern recognition.

e.g. detect 'A', 'B', 'C'.......

or: dectect differnt colors

4. algorithm:

q learning

calculate the different states' Q-function

5. how to avoid obstacles:

differnt from the grid world scenary, epuck will go 'into' the obstacles, namely wrong states. so how to deal with these

problems?

a question:

whether add new states for the new coming obstacles or 'blind alley'

project management:

division:

stage 0:

stage 1:

stage 2: