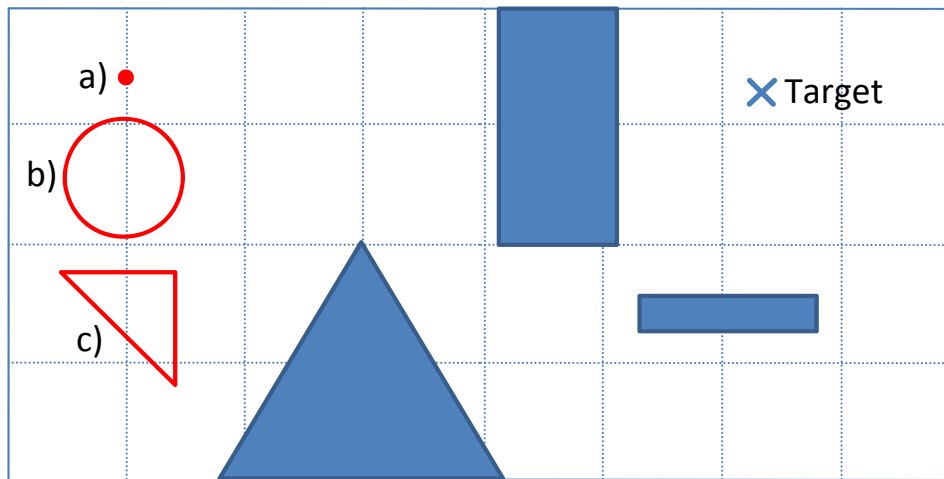


Managing Massive Multiplayer Online Games
SoSe 2018

Exercise Sheet 12: Path finding and antagonistic search

Discussion: July 4th, 2018

Exercise 12-1 Path finding (Homework)



The blue shapes represent obstacles in the field above. In the following we are looking for the shortest path the objects a), b), and c) have to follow to get past the obstacles and to the target.

Hint: To facilitate drawing, vertical and horizontal auxiliary lines are given which have a distance of one unit each.

- (a) Draw the visibility graph for the point tagged with a) and determine the shortest path to the target.
- (b) Draw the visibility graph for the circle tagged with b), which has a radius $r = 1$, and determine - if possible - the shortest path to the target.
- (c) Draw the visibility graph for the triangle tagged with c) and determine - if possible - the shortest path to the target. Assume that the triangle is right and isosceles, with edge length 1.