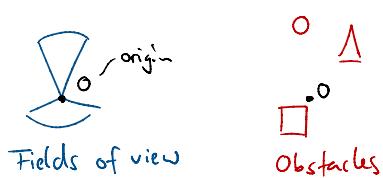


Concept 2: Visibility calculation in bounding box

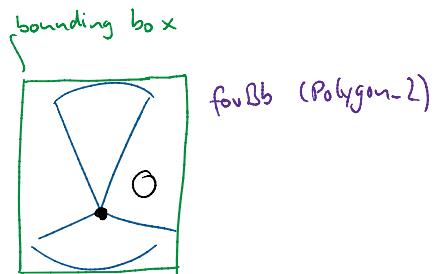
Donnerstag, 11. Juni 2020 15:19

- ① Two sets of polygons

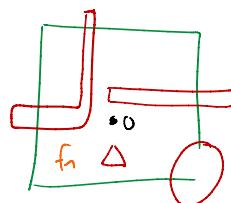
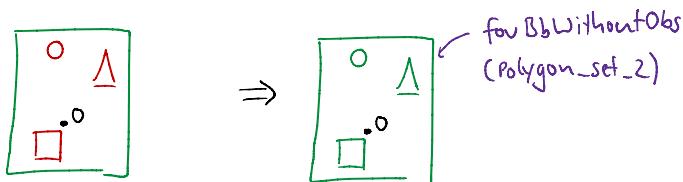


in purple the variable names used in the code
comments in orange

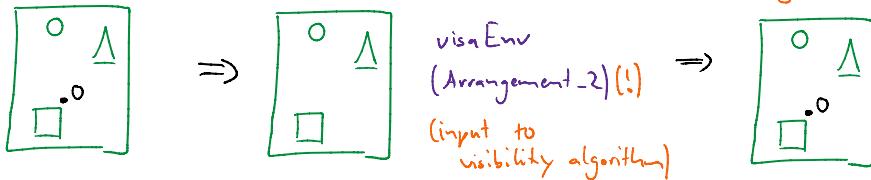
- ② Get bounding box of Fields of view



- ③ Subtract Obstacles from bounding box

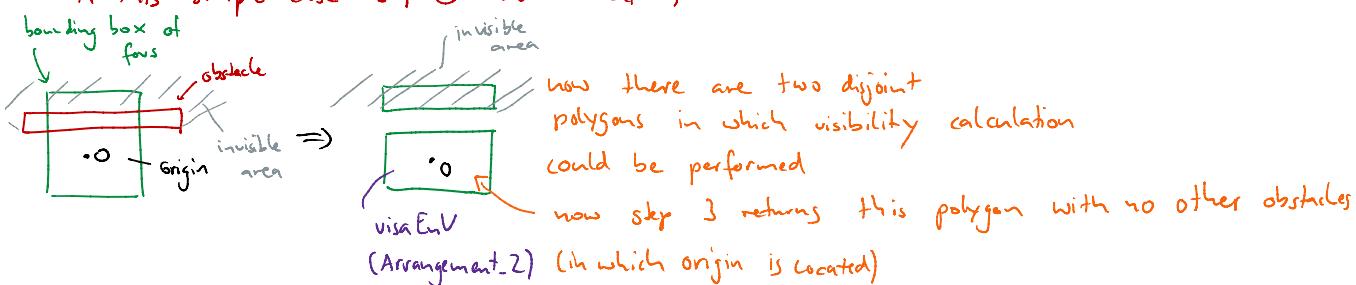


- ④ get polygon with holes in which origin is located (and convert polygon to arrangement_2 type)
no origin anymore!

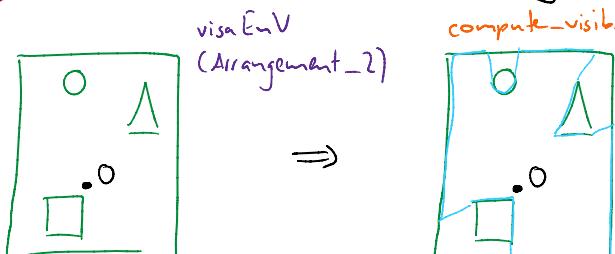


origin is added again to arrangement_2 obj visaEnv

in this simple case step ④ has no effect, but consider:



- ⑤ Calculate visible area in bounding box

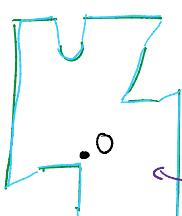


compute_visibility (...)

result

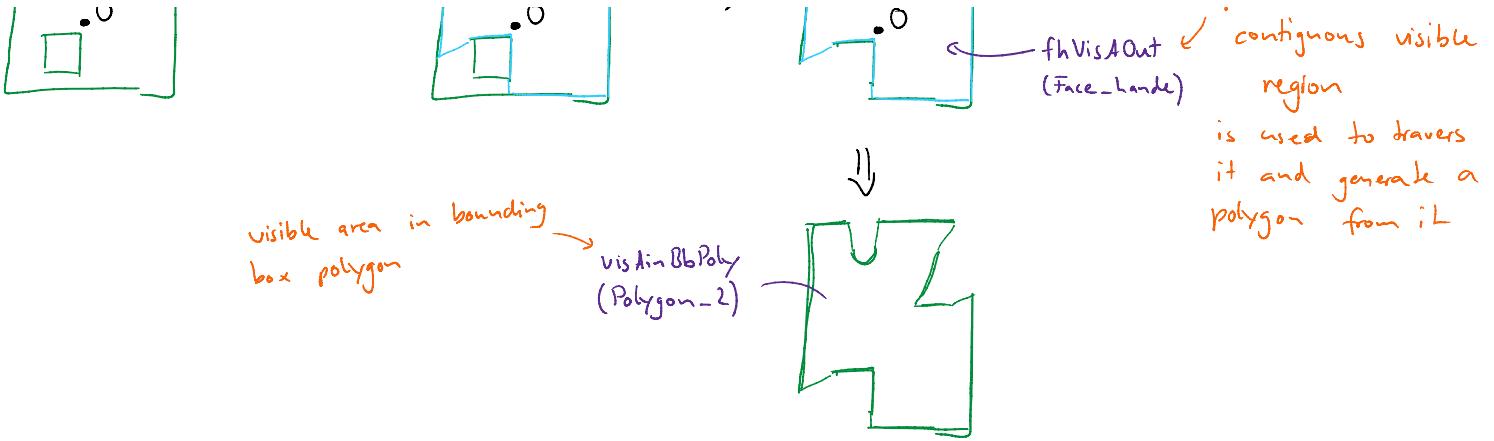
visible area inside bounding box arrangement

visInBbArr (Arrangement_2)

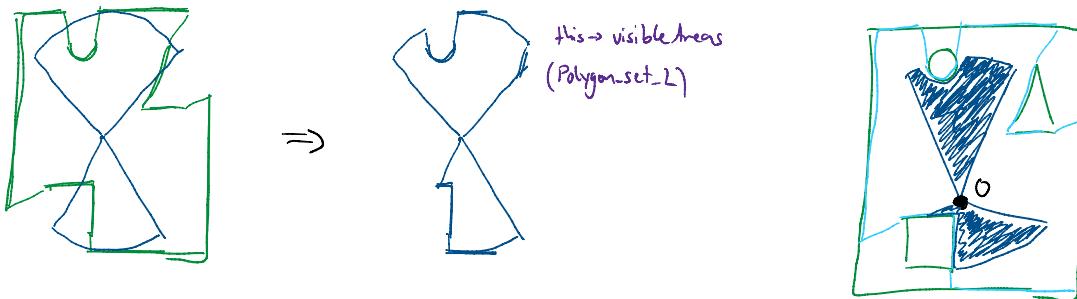


fhVisAOut (Face_Land)

points to the contiguous visible region



- ⑤ Calculate intersection between visible area in bounding box and field of view (calculate visible area)



- ⑥ calculate non-visible areas (fields of view minus visible areas minus obstacles)

