

Collisions

A Mr. F Presentation

Old Position

- For each of your moving objects, you need to keep track of...
 - currentX used to see **if** you intersect another object
 - currentY ←
 - oldX
 - oldY ← used to see **how** you intersect another object

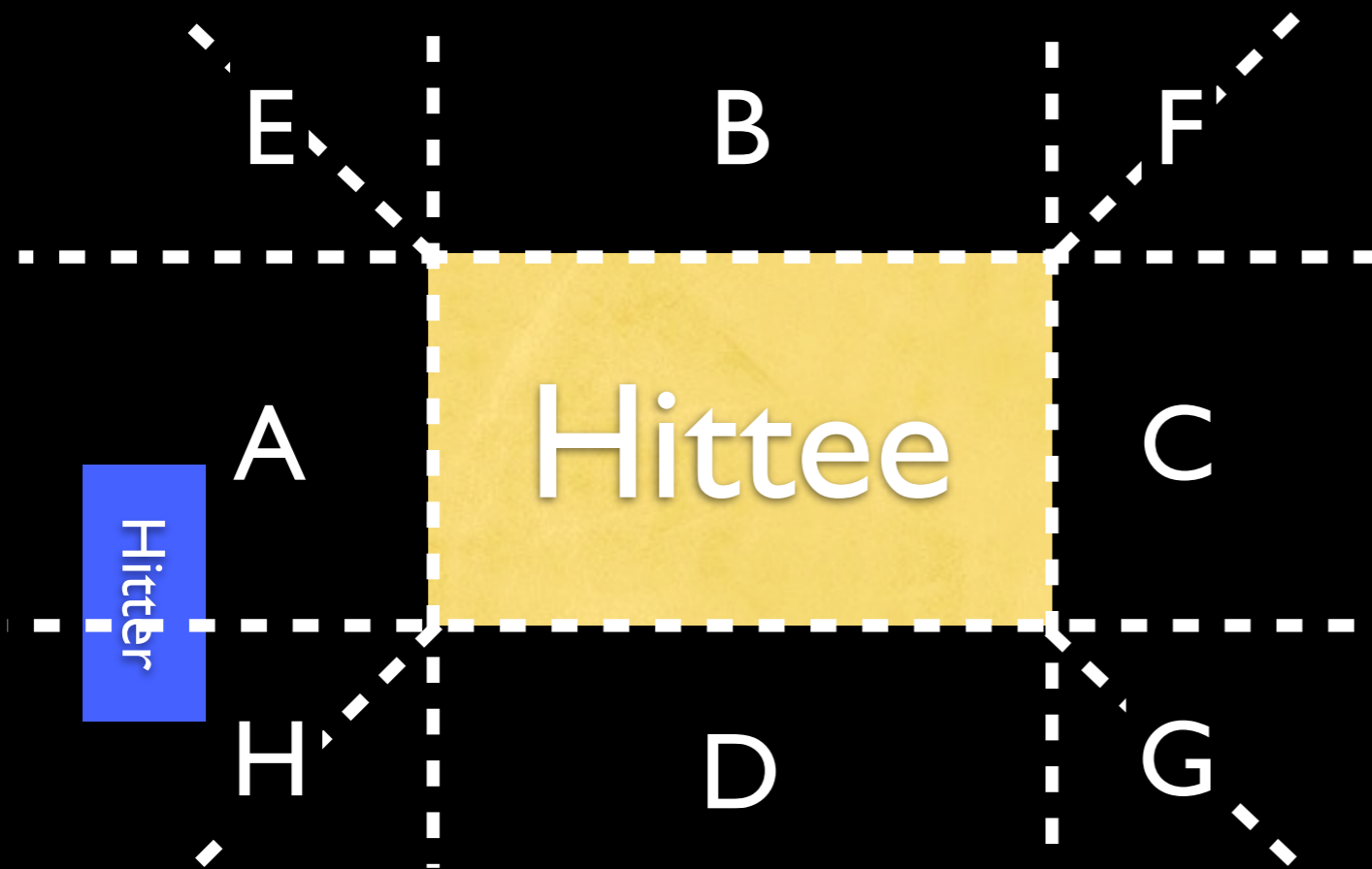
Hit Detection

The Eight Regions

Hittee

Hitler

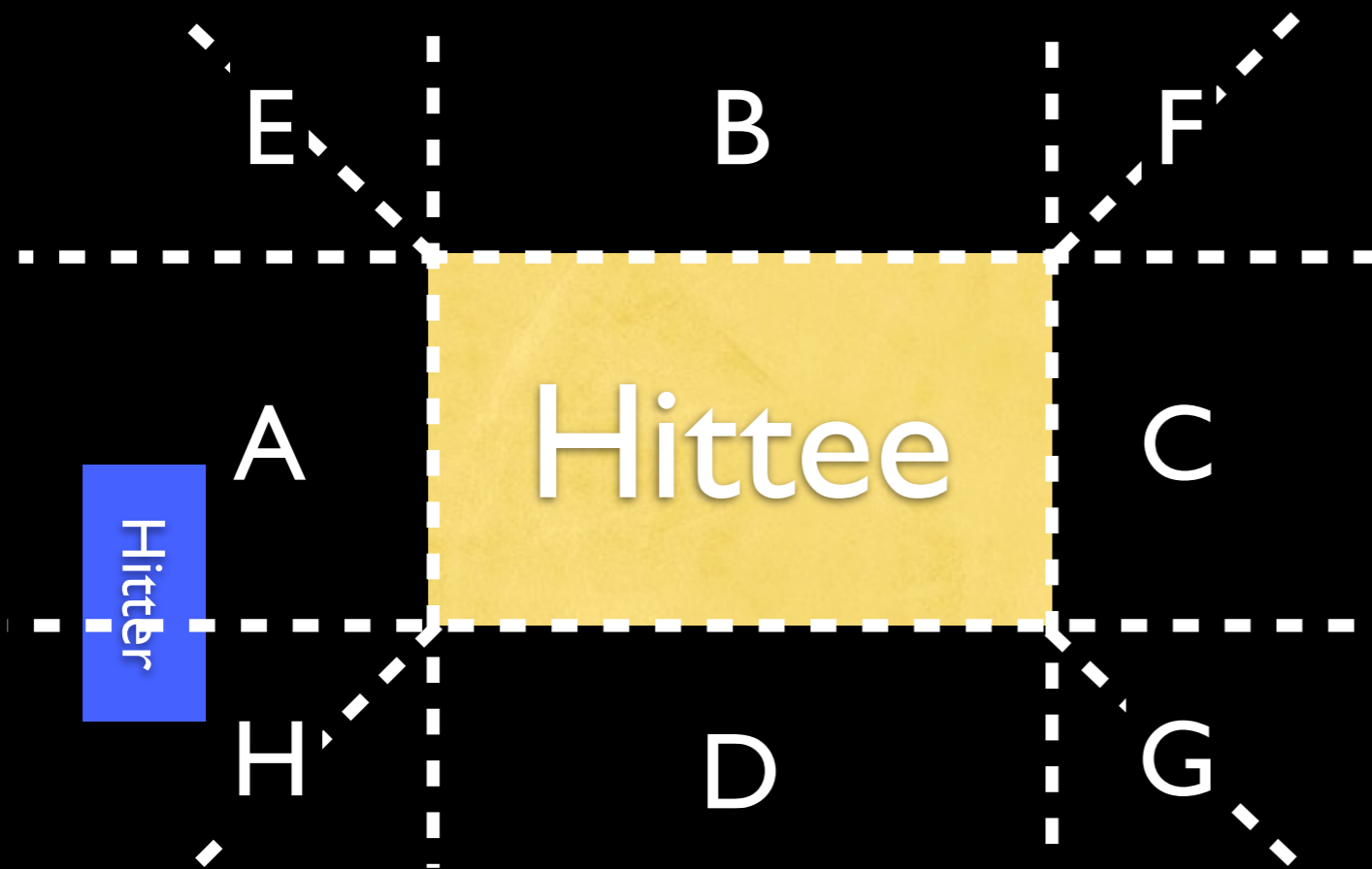
Hit Detection



Pre-intersection
Diagram (oldX,
oldY)

Need to check for intersection using (currentX,
currentY)

Hit Detection



Pre-intersection
Diagram (oldX,
oldY)

(oldX, oldY) determine which of the 8 regions you are inside of.

Hit Detection

- A good strategy is to check the corner cases first, then do the sides
- For case E, you check that your $\text{oldY} + \text{height} < \text{other's oldY}$ and that your $\text{oldX} + \text{width} < \text{other's oldX}$
- You're on the left part of E if $\text{abs}(\text{oldCenterX} - \text{other's oldX})$ is greater than $\text{abs}(\text{oldCenterY} - \text{other's oldY})$ [aka your x-distance is greater]