Review
IMGD 4000

Engine Architecture Types

• Broadly, what are the two architecture types discussed for game engines?
• What are the differences?

Pathfinding with Waypoints

• What is one potential problem with pathfinding using waypoints?
  Ans: blind spots, waypoint generation, kinky paths

• What is a potential fix to the problem above?
  Ans: fine-grained graphs, flood fill, path smoothing

Pathfinding with a NavMesh

• Is a Navmesh a replacement for A*? Why or why not?
  Ans: No. A Navmesh is a replacement for a waypoint graph. Instead of points, the graph nodes are polygons, covering the walkable area. A* can still be used to chart the path.
Tuning Pathfinding

• Sketch you how might you “time slice” to limit the CPU load of pathfinding

**Ans:** Divide search algorithm into “cycles” (e.g., one ply). Create a PathPlanner that stores progress along path and registers search with game engine (Path Manager). Object requests path to destination with PathPlanner. Create a PathManager that allocates out “cycles” to registered PathPlanners. Game engine (PathManager) allows for fixed number of cycles per tick.

Camera Control

• Describe the design of a camera zoning approach.

• How can you design camera dynamics not to move the camera with every movement of the player?

Camera Control

• What is blending?

• As part of blending, what is ease?

Camera Control

• Related to advanced camera control:
  – What is “zoning”?
  – What are “dynamics”?
  – What is “blending”?
  – What are “rails”?