**Scene Management Layer**

This document describes the scene management layer. This layer is an abstract upper layer around the Graphics Layer. This layer should never deal with OpenGL directly.

This layer deals with:

* Scene management (node based).
* Graphical Layers.
* Texture management: texture-atlas and so on.
* Space Management.
* The following basic components:
  + Mesh Renderer.
  + Sprite (with options to tile texture): a special type of mesh renderer.
  + Object Array: for dealing with lots of objects (like particles).
  + Sprite Array.
  + Polygon: maybe renderable or not.
  + Smooth Curve: maybe renderable or not.
* A particle system.
* Gizmos and ways of interacting with the components and creating them. In the first version, it’s gonna be fixed.
* Editor editing of properties.
* Copy and Paste of objects.
* Serializing and deserializing a scene.
* Interaction in-game and the editor (touch events, mouse events and keyboard events).
* Callbacks for update (sorted by priority) and drawing (it’s a retained mode, so we maybe don’t need that).
* Ways to reset state so a level can be reset or the editor is paused.
* Pausing the game (in editor and in game).
* Selection.
* Deleting, Hiding and Blocking nodes.
* User possible actions.
* Undo/Redo.
* Tools.
* No creation tools. We start with a basic shape and then we progress to complex ones.
* The game loop.
* Iluminação.