

Material Consolidation:

I believe it checks for the same image file and settings of one shader being used by different material zones. If they are duplicate, then it removes one of those shader, and uses the duplicate of the first material zone for the other part. Very useful in some cases, when you are limiting file size, or want to use a master material, but in other cases where you want to tweak shaders per materials zone, not as useful.

Merge multiple duplicate materials

Channel pack for specific materials

Different geometry with same material

需要注意的是：需要合并的纹理应该是物体在场景中距离相近的，如果物体在场景中的距离较远，则不建议合并纹理，因为这样做很有可能非但起不到优化的作用，反而降低了运行效率。

纹理类型 尺寸 以最小空间代价进行合并 减少纹理切换的同时最大程度节约纹理空间 texture —> texture atlas

算法流程如下：

- 1) 构造初始atlas. 根据模型中纹理的种类不同分别构建若干个空的atlas
2. 填充 atlas 对于每个atlas, 通过遍历模型中每个节点, 获取该类型的所有纹理 通过动态空间分配算法计算出atlas的尺寸和各子纹理在atlas中的坐标位置并将子纹理合并至atlas
3. 更新模型中各节点中子纹理对应的纹理坐标

<https://wenku.baidu.com/view/536c2e4c9ec3d5bbfd0a74f1.html>