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<https://lifan.s3.amazonaws.com/hw3/e410ce5163b6453b3b4327835d7d458e/20190314050535/index.html>

Acceleration model:

To accelerate the speed, we separate the whole space into little cubes of 1\*1\*1 size and then assign the objects to each cube which they belong to using a data structure of a hash map. In that way, when we do the ray tracing, we only need to check the small grids the current ray passes through, and check whether the objects those grids contain have a intersection with the ray. In this case, we don’t need to check all objects for each ray.

After using the acceleration model, the most time consuming test scene 7’s running time, drops tremendously from nearly 50 minutes to 27 seconds (both using openmp).

