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## Assignment Two: Path Tracing and Distributed Ray Tracing

Build Instructions:

\*\*run in command line, in the folder the files are located

- For path tracing compile using the path.cpp file:

- `g++ -std=c++11 path.cpp -o main` •

To generate the image:

- `main > image.ppm`

- For distributed ray tracing compile using the path.cpp file:

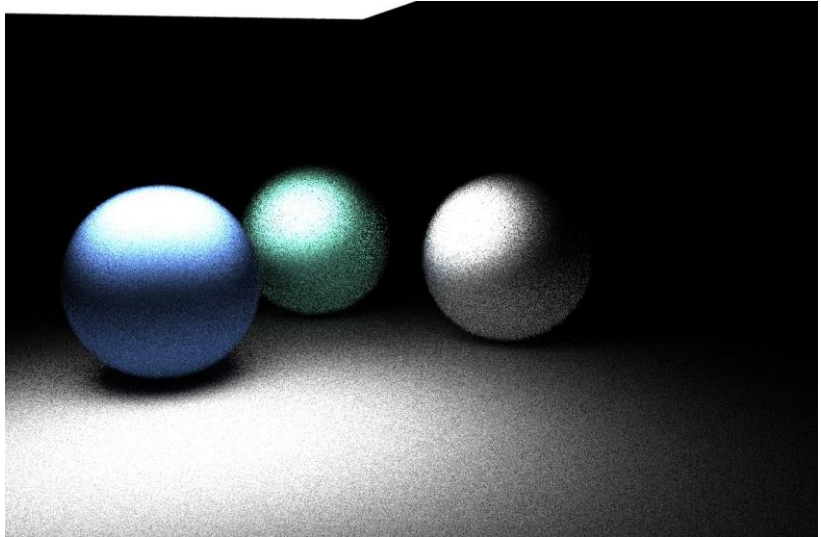
- `g++ -std=c++11 drt.cpp -o drt` •

To generate the image:

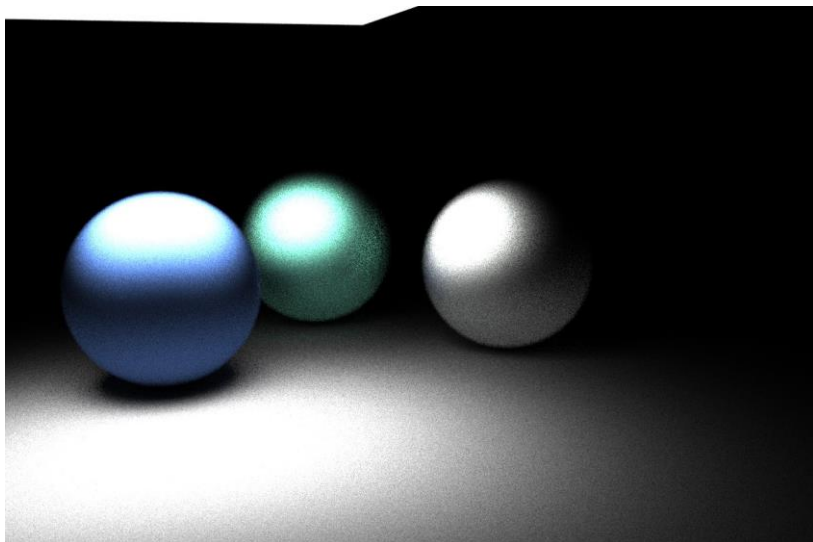
- `drt > image.ppm`

### Path Tracing

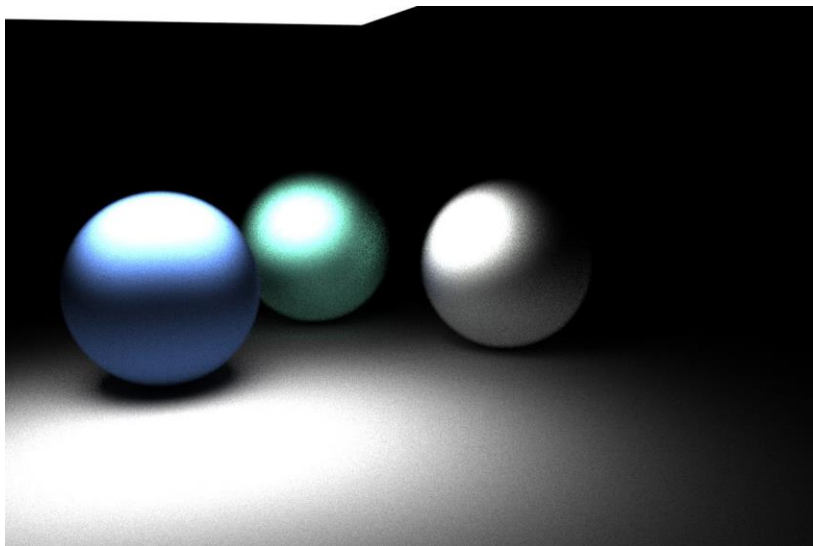
100 samples per pixel



500 samples per pixel

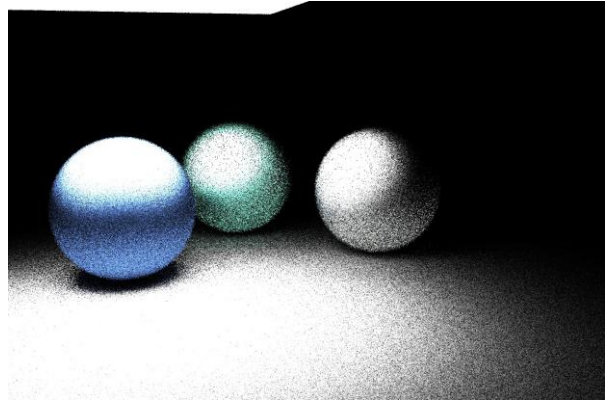


1000 samples per pixel

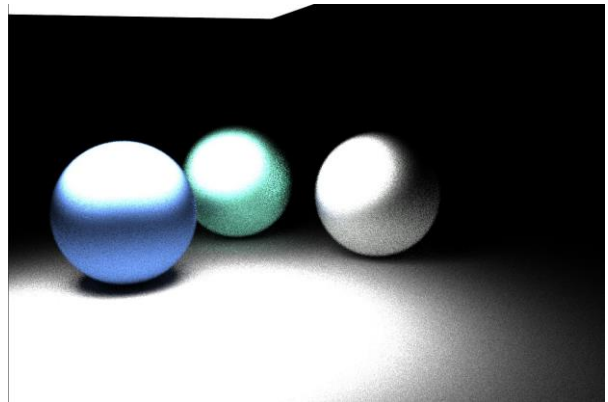


## Distributed Ray Tracing

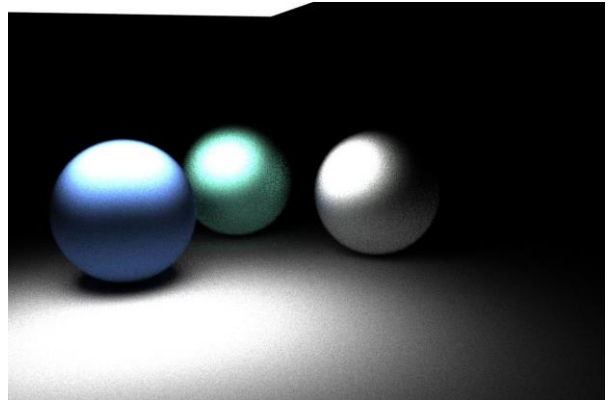
50 grid cells



100 grid cells



500 grid cells



Evaluation:

With path tracing a reasonable image can be made with 100 rays per pixel, while distributed ray tracing produces a reasonable image when there are 100 grid cells (a 10x10 grid).

A code book on ray tracing was referenced that belongs to the public domain according to <https://creativecommons.org/publicdomain/zero/1.0/> while working on this project.