VFX FIRST TEST TUTORIAL

1. Reduce the rendering quality:

Modify the macro MAX_PTRACE_SAMPLES on the file s3d-ptrace/core/proj/mmove/main.c

change the beginning of the file from:
#define MAX_PTRACE_SAMPLES 1000

to a small value, for example 10:
#define MAX_PTRACE_SAMPLES 10

save the modified version of s3d-ptrace/core/proj/mmove/main.c

Keep in mind that the quality of the rendering is proportional to the square root of this macro, and the amount of time spending rendering is in theory proportional to this macro. It means that increase the quality becomes more and more expensive in terms of rendering time. Unfortunately the balance of charge of our parallel processing rendering is not very good, and the gain in speed is not proportional.

2. Rebuild the project adjusting it to fast and low quality rendering

go to the directory s3d-ptrace/build and type:

```
cmake -DCMAKE_POLICY_VERSION_MINIMUM=3.5 ../core/
make
make install
```

3. Convert the video used as background (s3d-ptrace/demo/video.mp4) into HDR frames encoded in .pfm file format

go to the directory s3d-ptrace/demo and type:

```
./d0.sh
```

it will demands some time to producing frames: bk0.pfm, bk1.pfm, bk2.pfm... into the directory s3d-ptrace/demo.

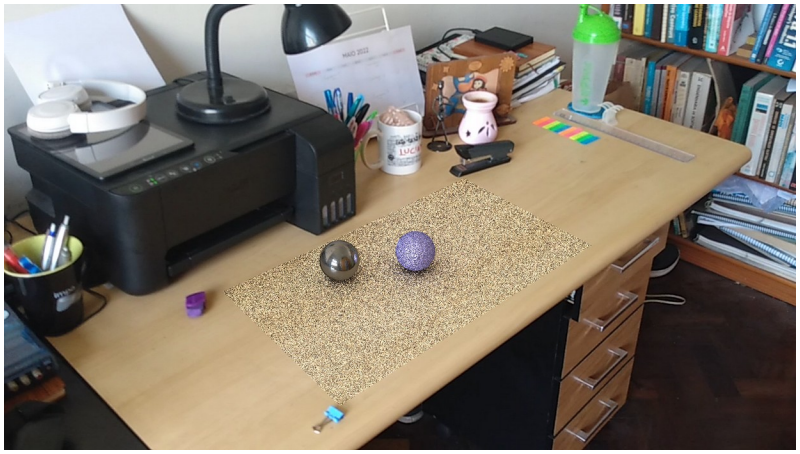
4. Render the visual effect in low quality from 3 different view positions

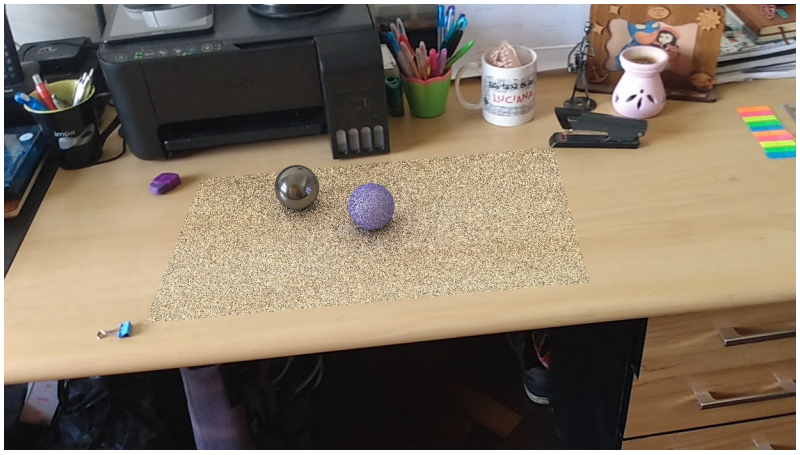
In the directory s3d-ptrace/demo type:

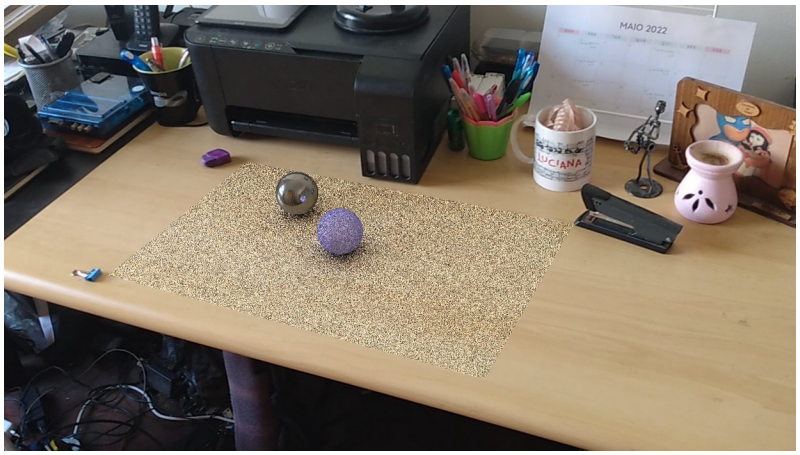
```
./d3.sh
```

It will produce the following images in out2.png, out.150.png and out230.png into the directory s3d-ptrace/demo. They correspond to the images of frame 2, 150 and 230.
It will produce also the HDR versions of them: out2.pfm, out.150.pfm and out230.pfm

The figures below corresponds to the images:







5. Increase the rendering quality:

Modify the macro MAX_SAMPLES_PTRACE on the file s3d-ptrace/core/proj/mmove/main.c

change the beginning of the file from:
#define MAX_PTRACE_SAMPLES 10

to a larger value, for example 1000:
#define MAX_PTRACE_SAMPLES 1000

save the modified version of s3d-ptrace/core/proj/mmove/main.c

It means that the rendering time will increase 100 times for each image, and they will have very low noise.

6. Rebuild the project adjusting it to very low and very high quality rendering

go to the directory s3d-ptrace/build and type:

make
make install

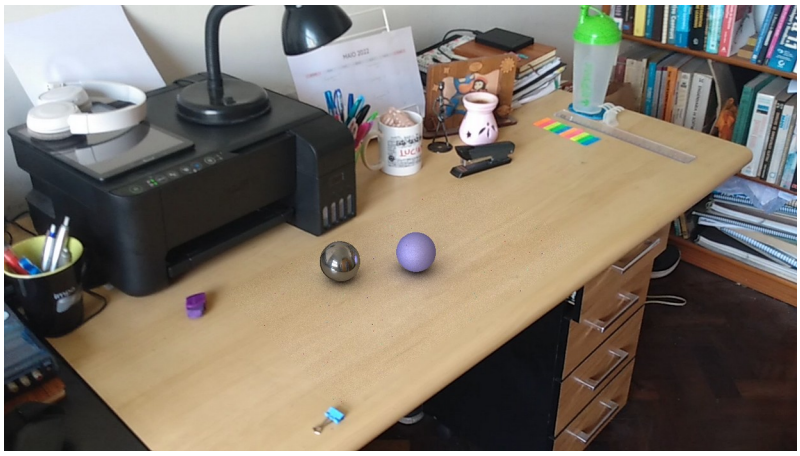
7. Render the visual effect in high quality from 3 different view positions (it is not necessary to convert the background int HDR files again)

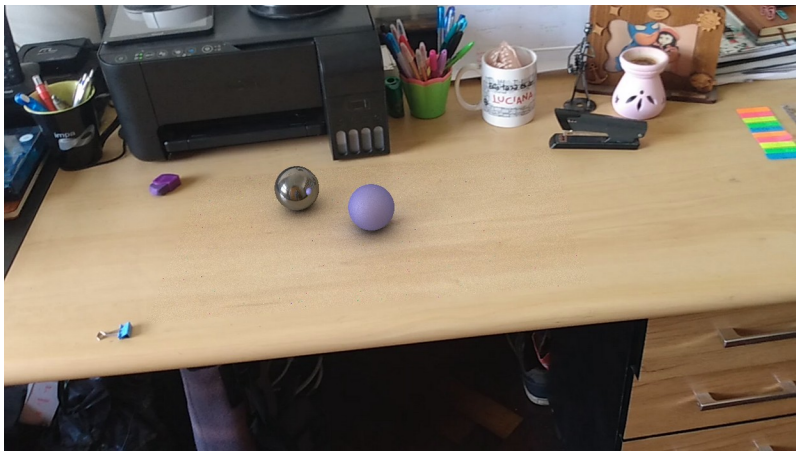
In the directory s3d-ptrace/demo type:

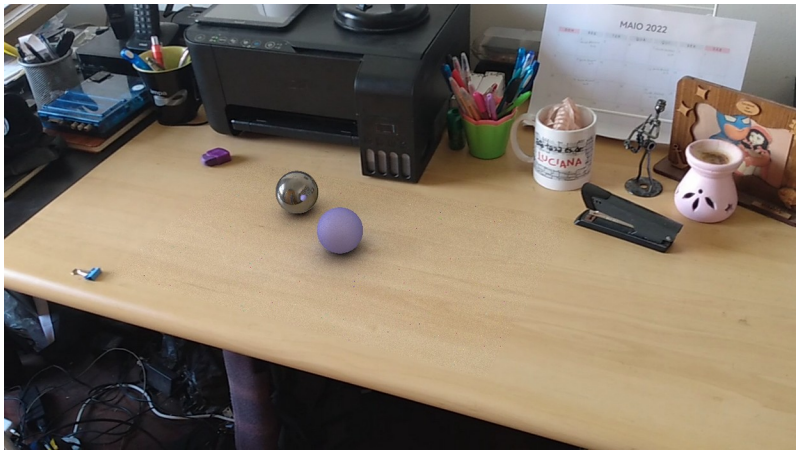
./d3.sh

It will demands some minutes to render each frame, but it will produce the following images: out2.png, out.150.png and out230.png into the directory s3d-ptrace/demo and also the HDR versions of them: out2.pfm, out.150.pfm and out230.pfm

The figures below corresponds to the images:



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