We assume that users alternate between navigating a scene and manipulating objects in the scene.

- The scene is divided in objects currently being manipulated and the non-interactive rest.
- During object manipulation the viewpoint is fix.
- First order reflections can then be divided in the following three groups.

The whole scene reflecting in the manipulated objects

- influences only those pixels showing the active objects
- has to be updated whenever the objects are moved → regular ray tracing (for the above-named pixels)

The manipulated objects reflecting in the static rest

- influences those pixels containing the static rest
- changes when manipulating the objects
- testing rays against the manipulated objects only; intersection properties are stored in G-buffers

The static rest of the scene reflecting in itself

- influences those pixels containing the static rest
- do not change when the objects are moved
- pre-computation (when manipulation starts);
  properties of the intersection point are stored

Composition of reflections

- pixel-wise comparison of the distance buffers
- lighting computation for the intersection closer to the reflecting surface (in case there are two possible)
- parameters from G-buffers (deferred shading)
- adding reflections to the local lighting

Resulting Performance

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