

Motivation

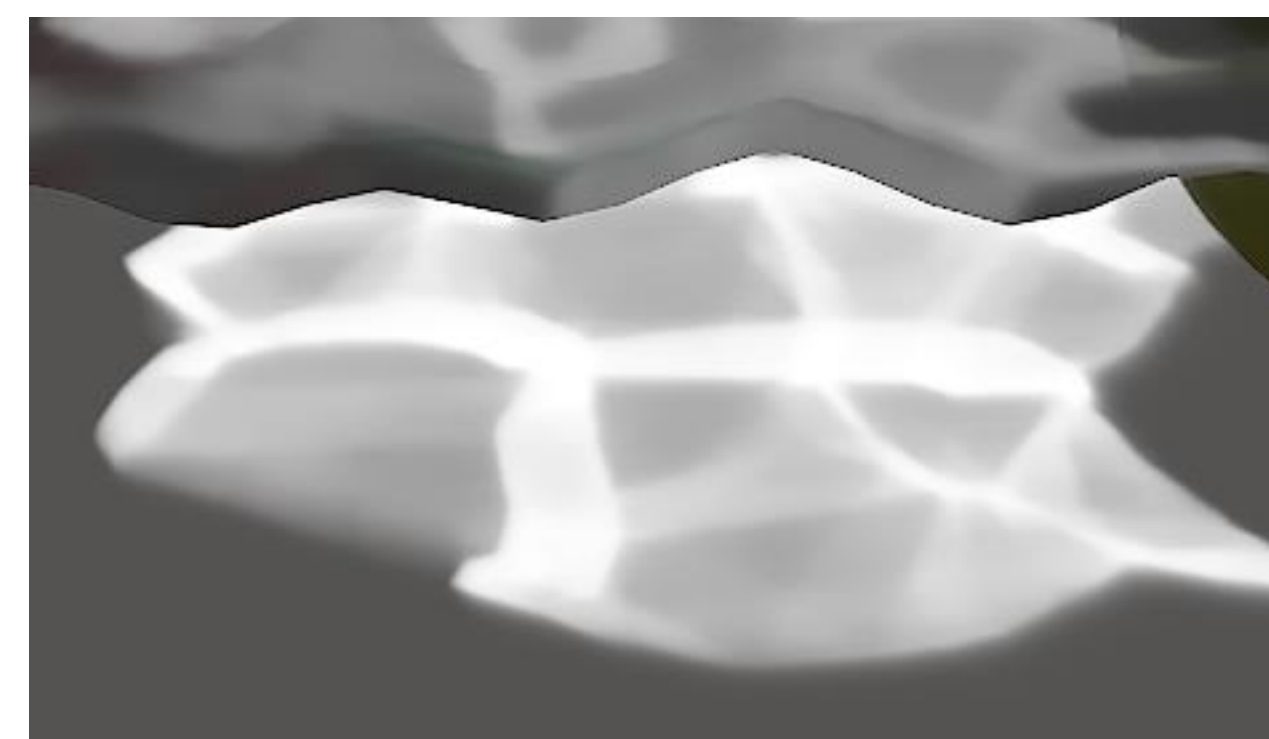
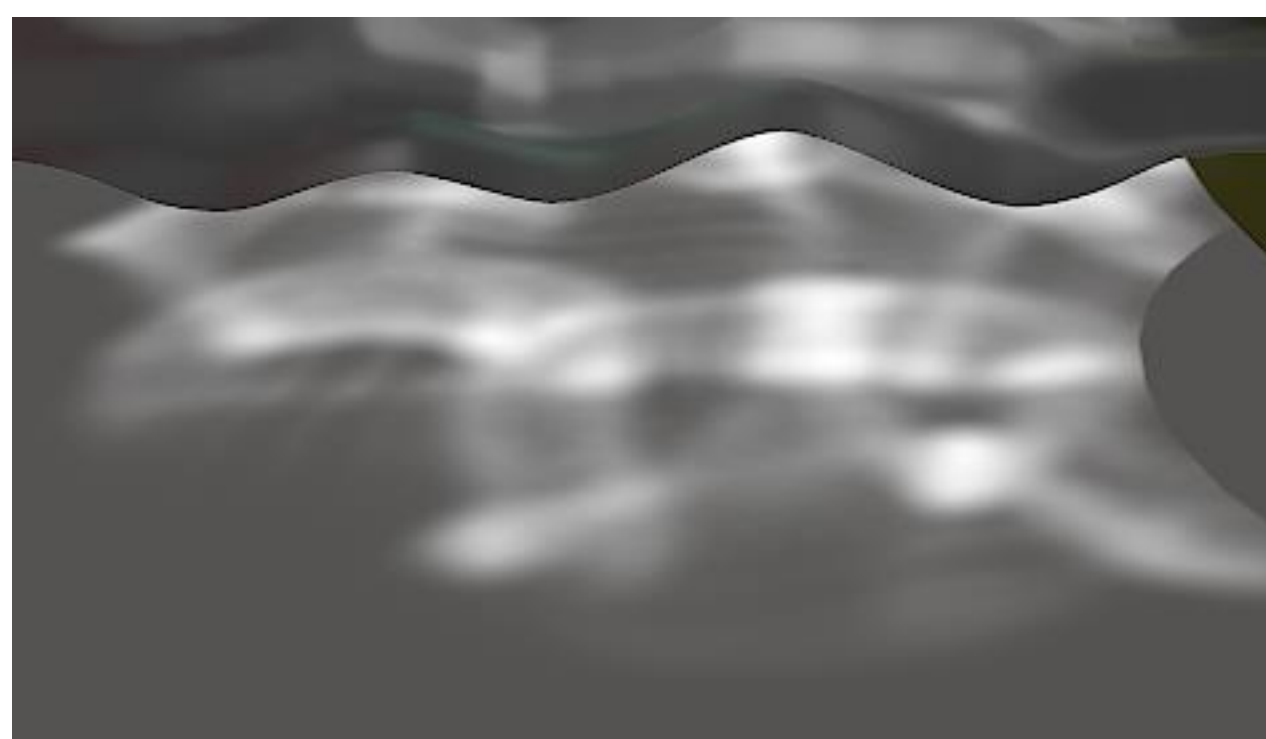
- Rendering caustics in real-time is difficult to achieve the same quality as Path Tracing.
- For SDS subpath, a bidirectional approach is needed (e.g. VCM, Path Space Regularization)
- Real-time path tracing usually requires recent GPUs with HW-accelerated ray tracing.
- **Challenges: high-quality caustics, SDS case, real-time, suitable for every GPU**

Benefits

- Over **Caustics Mapping** [Shah'07][Wyman'09]
 - Sharper edge
 - Smoother intensity gradient
- Works on every GPU, including integrated GPU without HW-accelerated ray tracing

Caustics Mapping

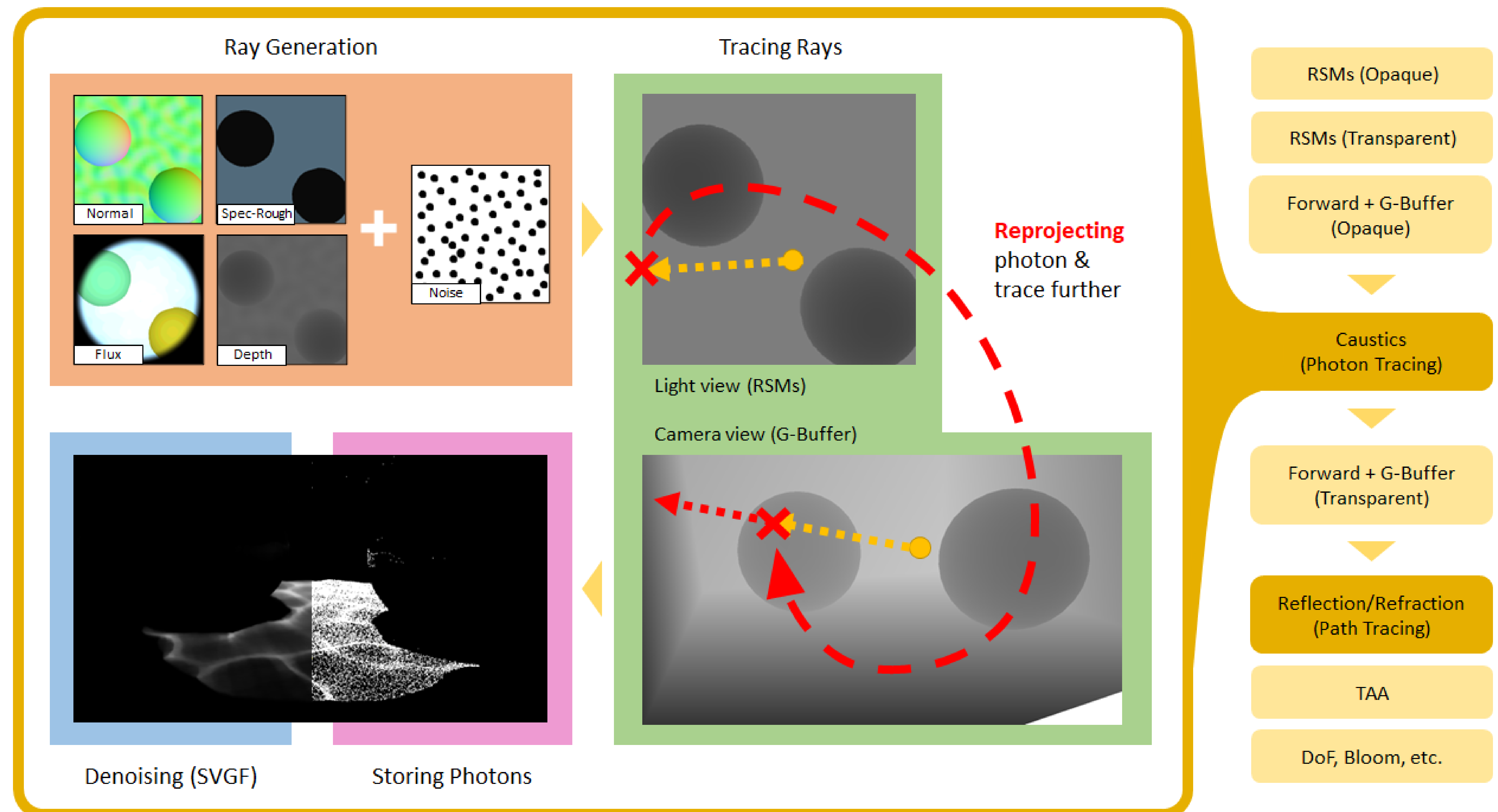
Ours



Future Work

- Adaptive sampling based on luminance via Wavelet Importance Sampling [Clarberg'05]
- A-SVGF [Schied'18] or faster denoiser
- Visibility Buffer to reduce memory footprint

Our Approach – trace in image space using > 1 views



Results

