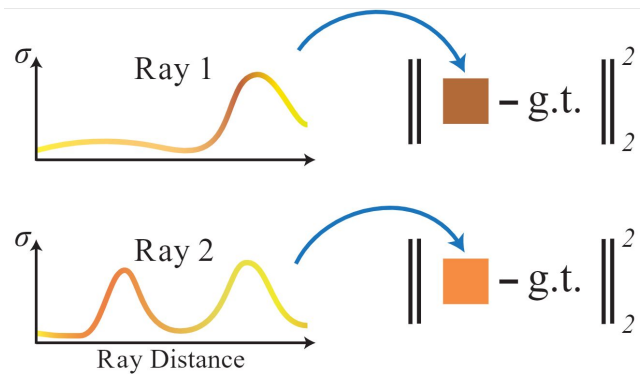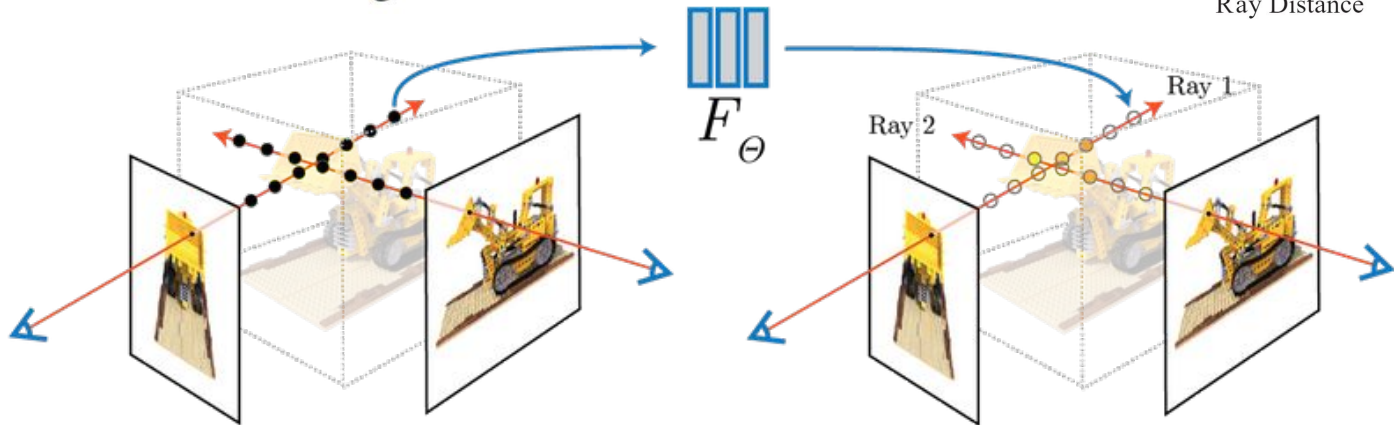# The NeRF is Dead.

The NeRF is Dead…

Long Live the NeRF.
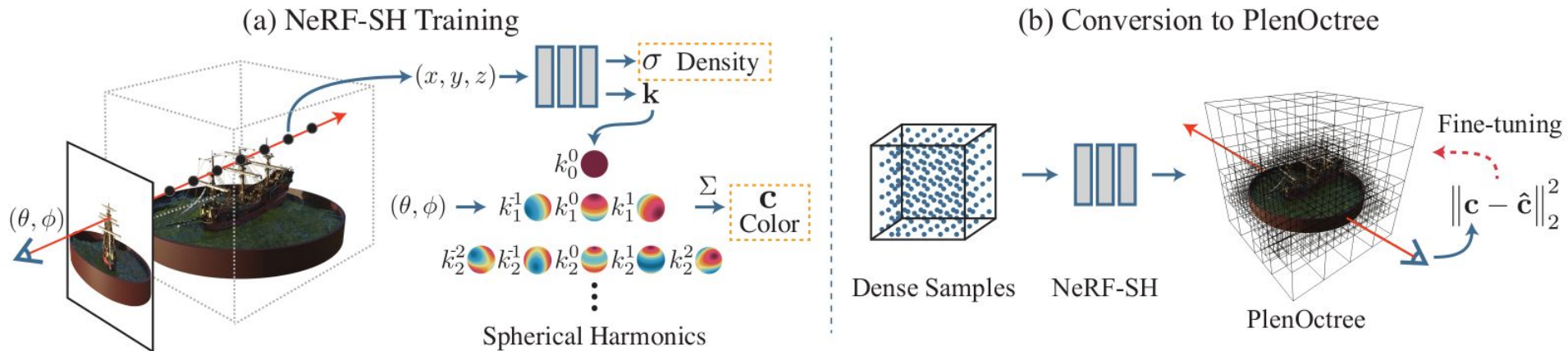
(03/2020) NeRF: Neural Radiance Field

https://www.matthewtancik.com/nerf

(03/2021) PlenOctrees

https://alexyu.net/plenoctrees/

(a) NeRF-SH Training

(b) Conversion to PlenOctree

(12/2021) Plenoxels

https://alexyu.net/plenoxels/

a) Sparse Voxel Grid

b) Trilinear Interpolation

$$\sum$$ Spherical Harmonics

σ

Ray Distance

Predicted Color

c) Volumetric Rendering

$$\min_{\{\sigma, \bullet\}} \mathcal{L}_{recon} + \lambda \mathcal{L}_{TV}$$

d) Optimization

Training Image
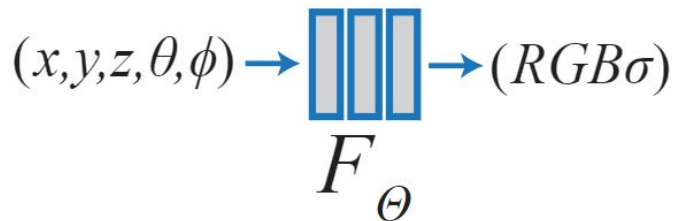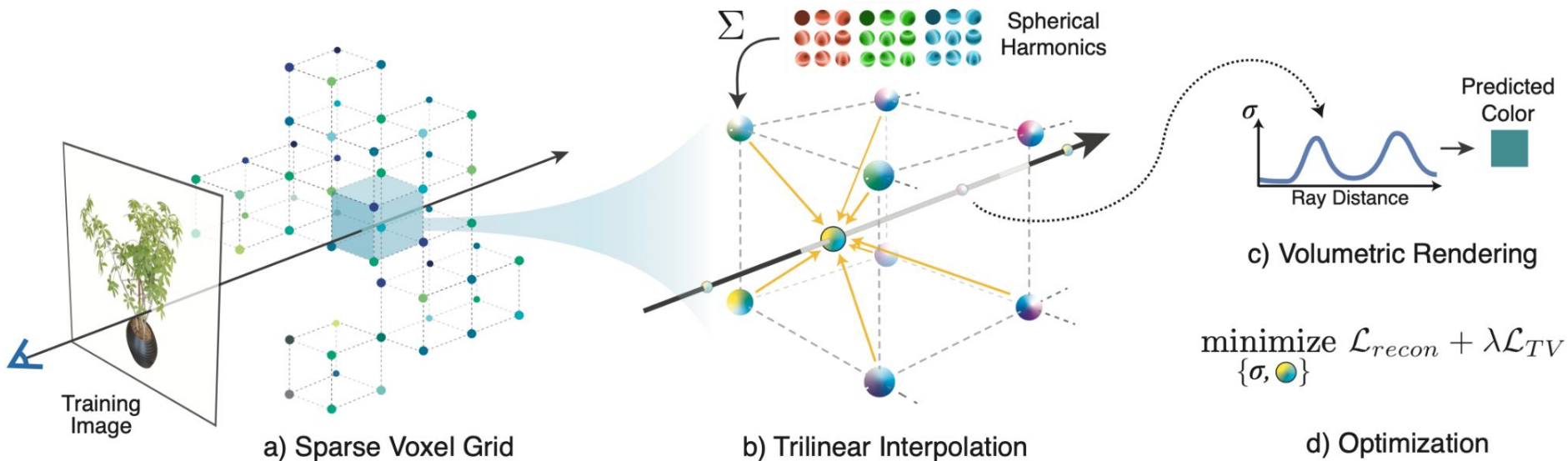
*Apparently this is CONIX work?

(01/2022) Instant Neural Graphics Primitives
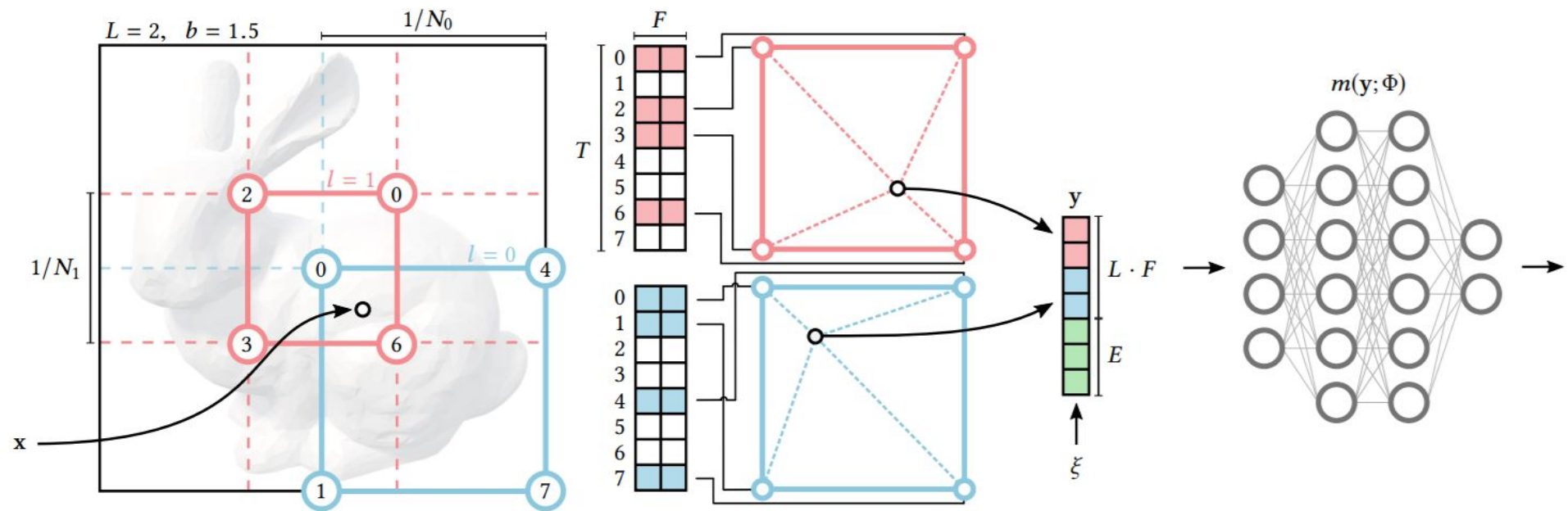
https://nvlabs.github.io/instant-ngp/

What's a NeRF anyway?

- Encoding 3-dimensional objects or scenes in the weights of Neural Networks in order to render novel views?

What's a NeRF anyway?

- Encoding 3-dimensional objects or scenes in the weights of Neural Networks in order to render novel views?

- Or enlisting machine learning techniques to help augment more traditional computer graphics methods?