

Virtual Viewpoint Reality:

Voxel based reconstruction: Poxels

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Approach:

- Capture many simultaneous images
- Use information about intensity to disambiguate shape
 - Generalization of Stereo
- Occlusion is modeled explicitly
- Computation proceeds iteratively
 - Surfaces gradually arise

Advantages:

- Uses all information in the images
 - Color and shading
 - Explicitly represents transparency
 - Explicitly represents ambiguity
- ### Disadvantages:
- Computationally Difficult (Currently)
 - Requires carefully calibrated images

Progress:

- Algorithm discovered
- Code demonstration
- Paper written

Next Steps:

- Better model of transparency
 - Faster computation
 - Using visual hull as first step
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Synthetic Data



Real Data