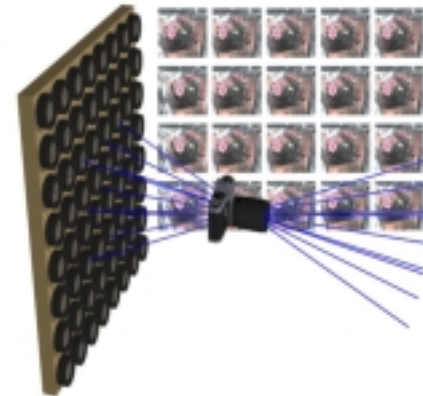




Project Overview



- § **New Approach to 3-D Computer Graphics**
 - § **Uses Images as “models”**
 - § **Reconstruction rather than “simulation”**
- § **End-to-end Solutions**
 - § **Acquisition devices**
 - § **New rendering algorithms**
 - § **Three-dimensional autostereoscopic displays**



MIT9904-14: Image-Based Synthetic Aperture Rendering

Leonard McMillan and Julie Dorsey



Progress Through June 2000

§ Publications

§ Dynamically Reparameterized Light Fields
[SIGGRAPH 2000]

§ A Low-Cost, Portable Light Field Capture Device
[SIGGRAPH 2000, technical sketch]

§ New Algorithms

§ Unstructured Light Fields





Research Plan for the Next Six Months

- § **Start construction of a real-time acquisition device**
- § **Begin investigation of a dynamic display device**
- § **Algorithm work**
 - § **Large field-of-view light fields**
 - § **High dynamic range light fields**
 - § **Combining image-based with traditional 3-D graphics**