MIT9904-20: High-Resolution Modeling of Architectural Interiors

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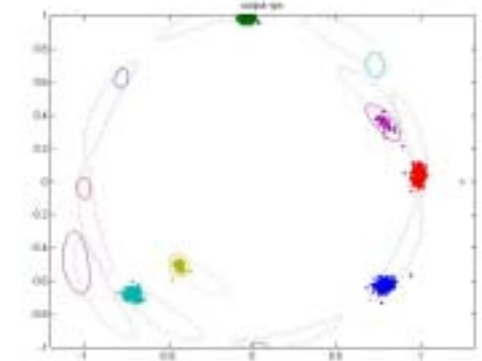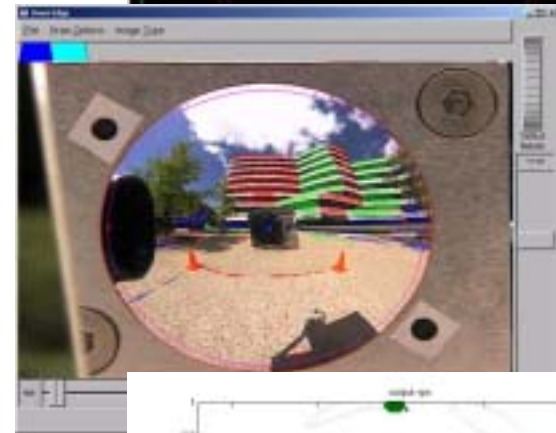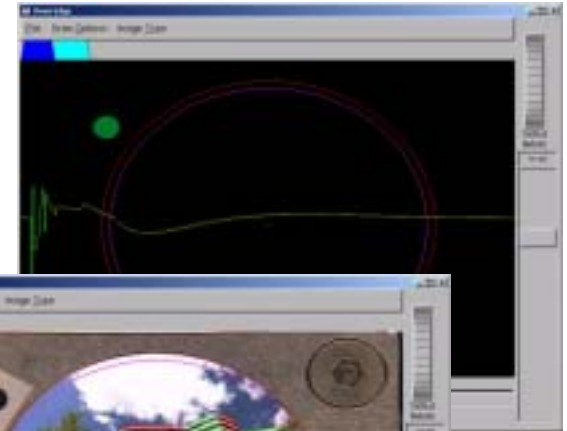# Bi-Annual Report, July 2001

Goal: Rapid Capture of Interior Architectural Spaces

- Develop rapid model capture capability

- Deploy rolling, omni-directional image sensor; localize observations and extract useful textured, geometric model

Recent progress

- Integrated omni-directional video camera with 6-DOF navigation sensors

- Acquired long outdoor and indoor video sequences

- Compensated for optics vibration; stabilized rotation

- # Next six months:
  - – Improve interior camera calibration
  - – Estimate translational camera motion
  - – Scale to acquisition of entire 2nd floor of LCS
  - – Super-resolution geometry, texture estimation