Virtual Viewpoint Overview

¥ Research directed toward a system that w
allow a user to observe any viewpoint o
sporting event.

— E.g. From behind the goal, participating, w pl

¥ Research Questions:

— Analysis of video from sporting events

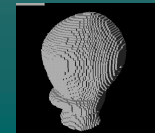¥ Construction of 3D models

¥ Provide high level commentary/statistic

¥ Analyze plays

¥ Modeling of players & the human form in general

— Including human movement

— Visualization/Presentation of VVR informatio

VVR:

Virtual Viewpoint Replay Progress

- ¥ Further definition of goals (with NTT) in
  - — Soccer as the demonstration sport

- ¥ Setup new VVR laboratory
  - — 14 computers with framegrabbers
  - — Real-time parallel software system
  - — Constructed a 3D scanner - to acquire test da

- ¥ Research

  - — New approach to 3D reconstruction using techr
    fromTomography- paper forthcoming

  - — Further refinement of this approach using stati
    interpretation

  - — Adaptation of human tracking system for VV

VVR:
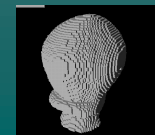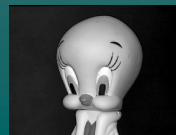
Virtual Viewpoint Re6amonth goals

- ¥ Setup a system of 12-20 cameras working
  real-time to construct coarse 3D models
  - Using intersection of silhouettes.

- ¥ Further refine our 3D reconstruction alg

- ¥ Study the integration of real-time silh
  system with 3Domographissystems

- ¥ Investigate graphics/rendering of 3D
  information

- ¥ Begin to analyze 3D human movements

VVR: