


## Final Project Brainstorming




## Spatial Data Structure Teams

- KD Tree: James, Amina, Tyler
- Octree: Greg, Mary, Nick
- Oriented Bounding Box (OBB) Tree: Chris, Andrew, Jonathan, Cagri
- Modified BSP Tree: Evan, Dan, Will, Elsa

- Team of 3-4 (at least one arts student)
- Randomly pick one term from of each category:
  - Application
  - Media
  - Technology
  - Theme
  - Modifier
- Propose a 1 week/1 semester/multiyear Project
  - Combine terms in an interesting & non-arbitrary way
  - 2 minute elevator pitch of your visualization
    - why? motivation
    - who? audience
    - what? goals & milestones that you will accomplish
    - how? what existing software & skills of your team members will you leverage

## Dynamic Projection Surfaces for Immersive Visualization



Theodore C. Yapo, Yu Sheng, Joshua Nasman, Andrew Dolce, Eric Li, and Barbara Cutler

*PROCAMS 2010 IEEE International Workshop on Projector-Camera Systems, June 2010*

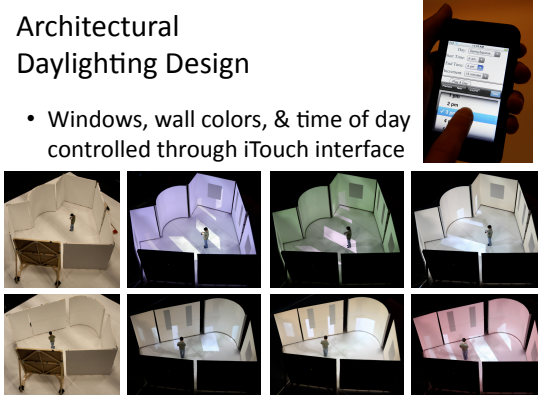
## Our System Goals/Requirements

- Large, human-scale projection environment
- People move freely within the space
- Projection surfaces can be moved interactively
- Varying illumination conditions
- Robust & real-time tracking and display



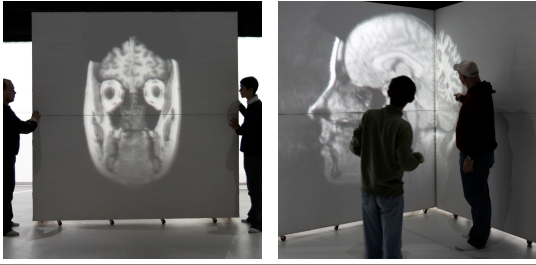
## Architectural Daylighting Design

- Windows, wall colors, & time of day controlled through iTouch interface



### Volumetric Visualization

- Cross sections of a 3D medical dataset virtually placed within the projection volume

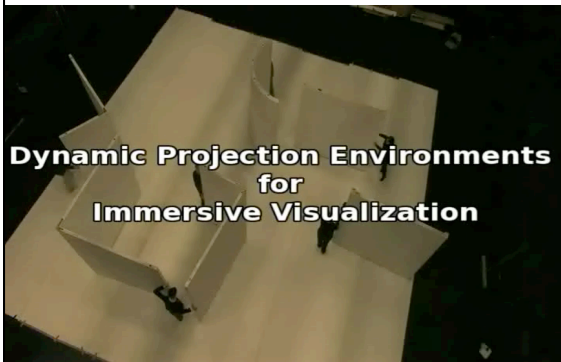


### General User Interface Elements

- Projection surfaces as input devices
- No instruction necessary to play the game!



### Dynamic Projection Environments for Immersive Visualization



*Panorama from Gehua Yang, DualAlign*