Luxsonic Project: Incremental Deliverable Features

Completed Incremental Deliverables

ID1

- Build project successfully using build infrastructure
- Look around 3D environment that contains generic objects, headset calibrated correctly
- Interact with an object in the environment using:
    - Mouse
    - Keyboard
    - Controller (if department has the hardware)
- Load a sample DICOM image and display it
- Crude 3-monitor display prototype

Results: All of the above except the sample DICOM image were successfully incorporated into the prototype.

ID2

- Better, rebuilt displays (using best practices)
- Interact with Copies to
    - Move them in space
    - Close and open monitors
    - Resize monitors
- Integrate Touch controllers into system.

Results: Copies can be moved and Touch controllers were integrated successfully, but Copies cannot yet be closed or resized using the Touch controllers. DICOM integration was pushed back to ID3 after discussion with the client.

ID3

- DICOM image filesystem
- Open and close image files from filesystem
- Dashboard and Tray implemented
- Pull Copies out of the Dashboard
- Program UI
    - Quit
    - Options
- Crude anti-motion-sickness/eyestrain features

Results: No motion sickness/eyestrain features were implemented. The filesystem exists in prototype form but has not been incorporated into the project proper. DICOM parsing was tested on a branch but not incorporated into the project proper.

Future Incremental Deliverables

ID4

- DICOM report display
- Snap Copies to a "grid" or predefined layout when moving, unless trigger button depressed
- Environment options for lighting
- Load images from file browser
- Anti-motion-sickness/eyestrain features
    - Field of View adjustment

ID5

The main focus of this deliverable will be to polish the features from other deliverables—this time is slack to accommodate the inevitable delays in completing previous features. Given time, we will attempt to pursue the following:

- Report dictation from within VR
- Cycle through DICOM images as animation
- Save/load representation of workspace