News

XYZ in 3D

by Jimmy Miklavcic, CHPC

The Center for High Performance Computing and Another Language Performing Arts Company presented the world premiere of XYZ (2013) on February 22, 2013. XYZ was a telematic cinema performance integrating live performance and 3D stereographic cinema performed in INSCC's VisLab Blackbox Theater.

XYZ was written by Elizabeth Miklavcic as a digital poem where four transcendental entities from space arrive to Earth, posing questions that engage our existence within the cosmos. The fifth character, Gaia, played by Ms. Miklavcic, represented the planet Earth. Gaia prepared the audience for the pending visit of Colored-By-Numbers (Hanelle Miklavcic), Ghost (Alexis Leavitt), Marooned (Jimmy Miklavcic) and Rose (Elizabeth Miklavcic) and returned after the visit to aid the audience become reacquainted with solid ground.

The performance incorporated 3D active stereographic cinema, made possible by the aid of Nvidia's Quadro 5000 graphics card and an Acer h5360bd 3D DLP Projector. Actors were recorded in front of a green screen. The video was then processed and edited with Apple's Final Cut Pro 7 and the rendered image sequences were mapped onto plane surfaces in Maya 2012. Thin circular objects, with one character in each object, were created by using a Boolean intersection between the planar surface and a flattened cylinder 720 pixels in diameter. These circular objects were then placed inside clear bubble objects that were floated, by animation, throughout the various scenes of the piece. NASA images of several different space environments such as the Green Ring Nebula, the Eagle Nebula and the Fantastic Four Galaxies were incorporated to establish a place in space for the entities to float about.

The entire production was developed by co-directors Elizabeth and Jimmy Miklavcic. This included image processing, editing original video, animating the choreographic movement of the entities and rendering left and right eye image sequences. The left and right eye image sequences were then imported and edited again in Final Cut Pro where audio and original music was added. Once completed, a final stereo video pair was exported for playback in a stereographic player and displayed on the large screen in the VisLab Blackbox Theater. Further development includes creating an anaglyph (red/cyan) video for additional screenings in larger venues and video streaming over the Internet.