

Frank: The IMAX folks came to us and said that they were producing a film that would chronicle the history of Hubble and with a special emphasis on Servicing Mission 4. They also wanted to show Hubble imagery. Plus they wanted to pull them out into 3D. That was an incredibly exciting project that we couldn't pass up.

We weren't just doing just one image for this movie. We were doing 9 different images in the 3 minute segment that we created here.

Zolt: One of my primary tasks with the Hubble project is to produce color images from Hubble Space Telescope data. Cameras on the Hubble are black and white cameras. They don't produce color pictures, so we take that data that's intended for scientific analysis and we produce photographs from those data.

If you're looking at an actual 3 dimensional object, you have the opportunity to go around it, to see all sides of it. In this case, we're only seeing one side of this thing. So we can only infer what's around the corner.

Lisa: I'm kind of unofficially known as the cleaner. I will go through and pixel for pixel take out anything that should not be there, scan the image to make sure there are no artifacts that are imparted by the telescope, they're not really there in outer space.

In the 3D project, one of my primary objectives was to take the image and split it into separate layers so that all the foreground stars had to be removed and put into a separate layer, those stars were then separated into separate layers, so you had stars that were really really close, stars that were in the middle, stars that were in the back. Everything attached to the main object was now set in a second layer. There were sections of the object that were supposed to be a little bit closer, stuff that was supposed to be in the middle, stuff that was supposed to be in the background. And anything that was to be in the background had to be in a third layer.

Greg: My role in the IMAX 3D movie was to build a 3D model of the Orion nebula. Hubble only takes 2D pictures so we had to carve what we thought it would look like and reshaping the geometry. Because the geometry overall was a flat grid. And from that grid it was actually made into three dimensions.

Frank: It was a team effort in terms of Lisa would pull out the stars in the image. Zolt would separate out the nebula image. Greg would work on getting the 3D model. I was doing the camera work and doing some of the rendering and such. And so because we had such a small team with so many tasks to do, each member was a critical part of the team.

Lisa: You needed to work every single aspect of it to make it believable and true to what the scientists felt the actual object looked like.

Zolt: Looking at the Hubble images, there's a level you can see them as a visual object and you can be inspired by that. If you learn a little bit about what those objects are, then it draws you in kind of in another dimension; it's not a physical dimension but it's another dimension of understanding. And now with the 3D aspect of it, it literally brings that third dimension into the picture.