

# PRIME 2014 BRISBANE AUSTRALIA

PROJECT:

KEPLER WORKFLOWS FOR MRI IMAGE GENERATION

WEEK 2 JULY 8<sup>TH</sup> REPORT

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# SET BACKS WITH WINDOWS ENVIRONMENT AND PYTHONS COMPATIBILITY WITH KEPLER

- So last week after getting the Stanford MRI Python script (Link Below) on a windows machine I ran into problem after problem and realized Windows and Kepler may not be able to support what I was attempting to do
  - [Stanford MRI Python Script](#)
- I met with Hoang a post graduate experienced in Kepler and discussed possible solutions to the road blocks I had encountered in my research.
- He recommended I create a Linux system and migrate all the work I have done thus far onto it and try and continue that way.

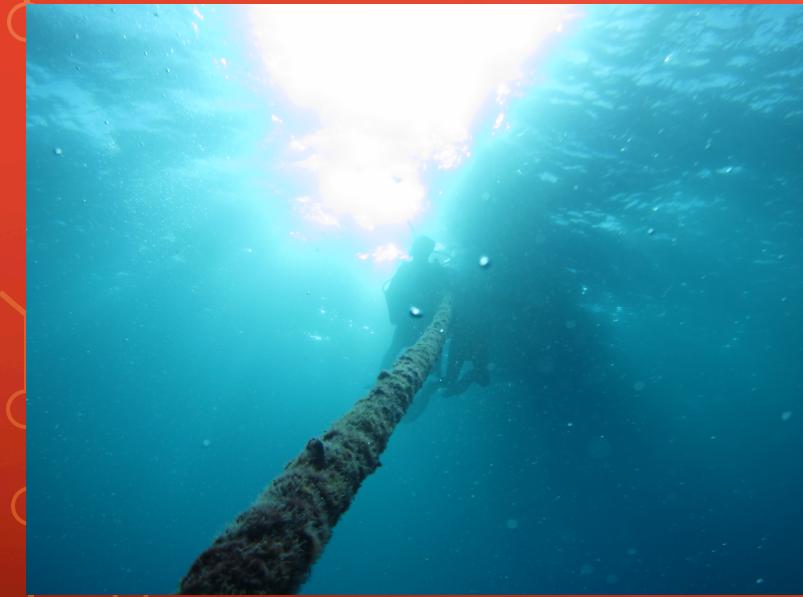
# PROJECT MIGRATION TO LINUX – UBUNTU ENVIRONMENT

- Next I generated a new virtual machine and began migrating all my work over to a Linux based environment.
  - I ran into the same problems as in windows. Mayavi is not an easy python package to get running properly.
  - I got the project back up and running with some work and was able to continue my project
- I ran into the same problem with Keplers support of Python
  - Kepler does not support the needed packages for its Python actor's
  - To work around this I created a local execution actor in Kepler which essentially uses all the existing configuration of the machine to run the python script outside of Kepler. This is a kind of work around but does not accomplish my end goal of having a stand alone set of actors to display MRI data in Kepler.

# FINDING A NEW MEANS TO CREATE MRI WORKFLOWS IN KEPLER

- Realizing that the Stanford Python script was not going to lead to any novel additions to Kepler I decided to move my research in another direction.
- My next steps will be to do research on a new way to bring MRI input and image output to Kepler
  - My research has started to point to using a medical file type called DICOM which is the most widely used standard for MRI medical data.
  - I will need to find or create Java libraries for handling these files types to implement them correctly in Kepler
  - In the coming week I will develop a plan and research the tools to hopefully bring DICOM files into the Kepler environment as an input file

# SCUBA DIVING STRADBROKE ISLAND



# WHALE WATCHING STRADBROKE ISLAND



The splashes in the distance of this picture are Humpback Whales jumping out of the water.