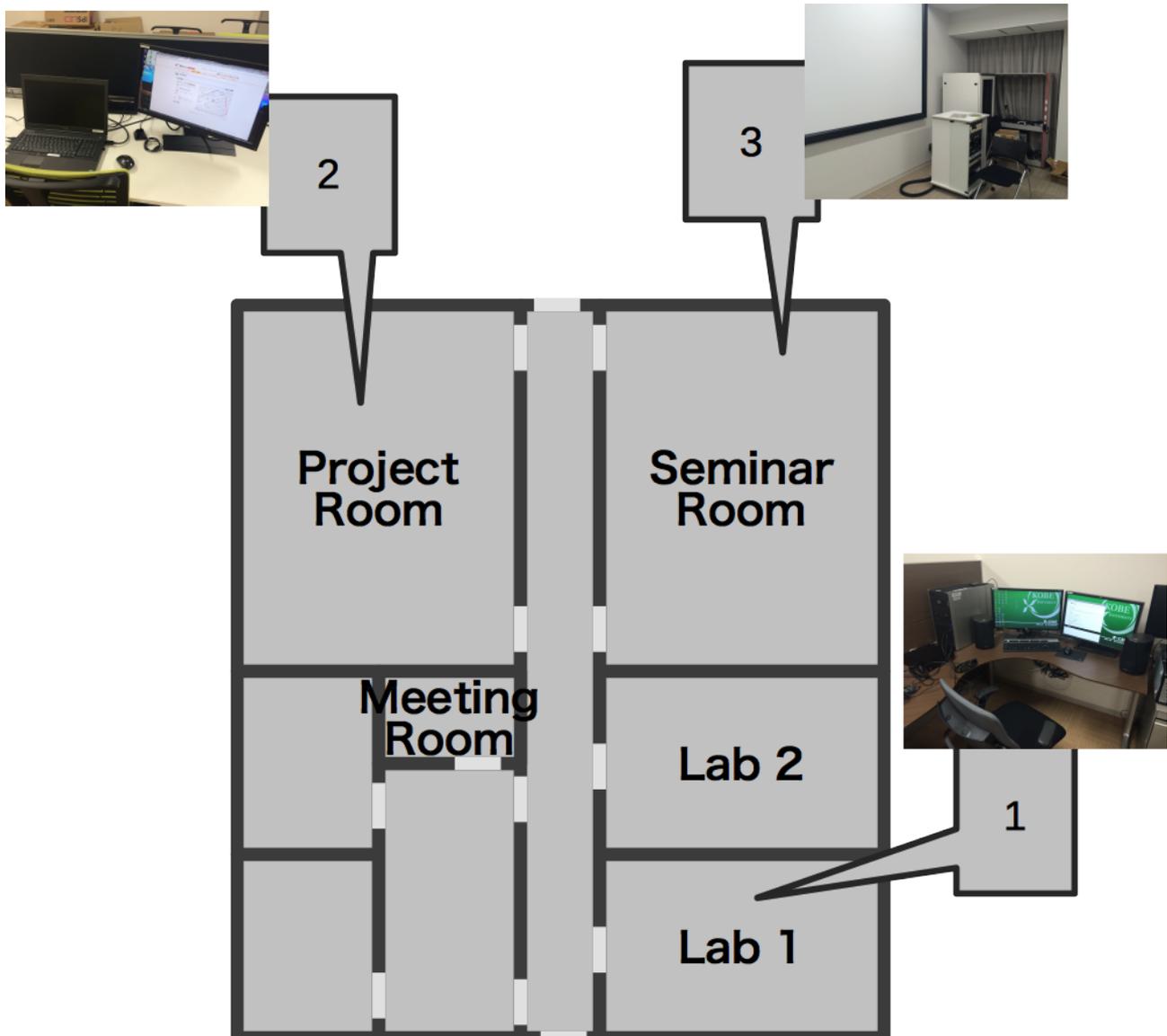


Creating Stereoscopic movies at Kobe University ECCSE

For final presentation, if you want to show stereoscopic movies, you need to create stereoscopic movies. We need to check if stereoscopic movies are valid. We have some stereoscopic enabled computers for checking that.

1. [Room 206: Lab1] Workstation with 3D-LCD.
2. [Room 207: Project Room] Mobile Workstation with 3D-LCD.
3. [Room 208: Seminar Room] Workstation with 3D-Projector.
4. [Room 103: Visualization Room] Workstation with 3D-Projector.(π -CAVE)



Please ask me how to use these computers.

For final presentation, we need to create stereoscopic movies and install those movies to No.4 computer. No.4 computer is the equipment of π -CAVE, but it can display same image(front left screen of π -CAVE) on the large screen at Convention Hall.

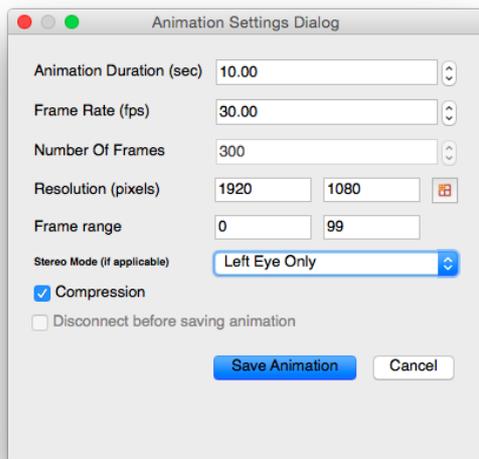
You cannot show stereoscopic movies on your laptop-PC. For example, you cannot embed the stereoscopic movies in PowerPoint slides. You need to change projector's input from powerpoint slides on your laptop-PC to the stereoscopic movie on No.4 computer. I will tell you how to do that on Sunday.

We need to create, check and install stereoscopic movies before final presentation.

I recommend the size of stereoscopic movie is 1920x1080 , frame per second is over 30 fps and the name of the movies suffix is _L for Left eye movie and _R for Right eye movie for convenience.

e.g.) temperature_L.mp4 temperature_R.mp4

And I suggest that color bar and axis arrows are disabled for confortability stereoscope.



In this case, Animation mode is RealTime.

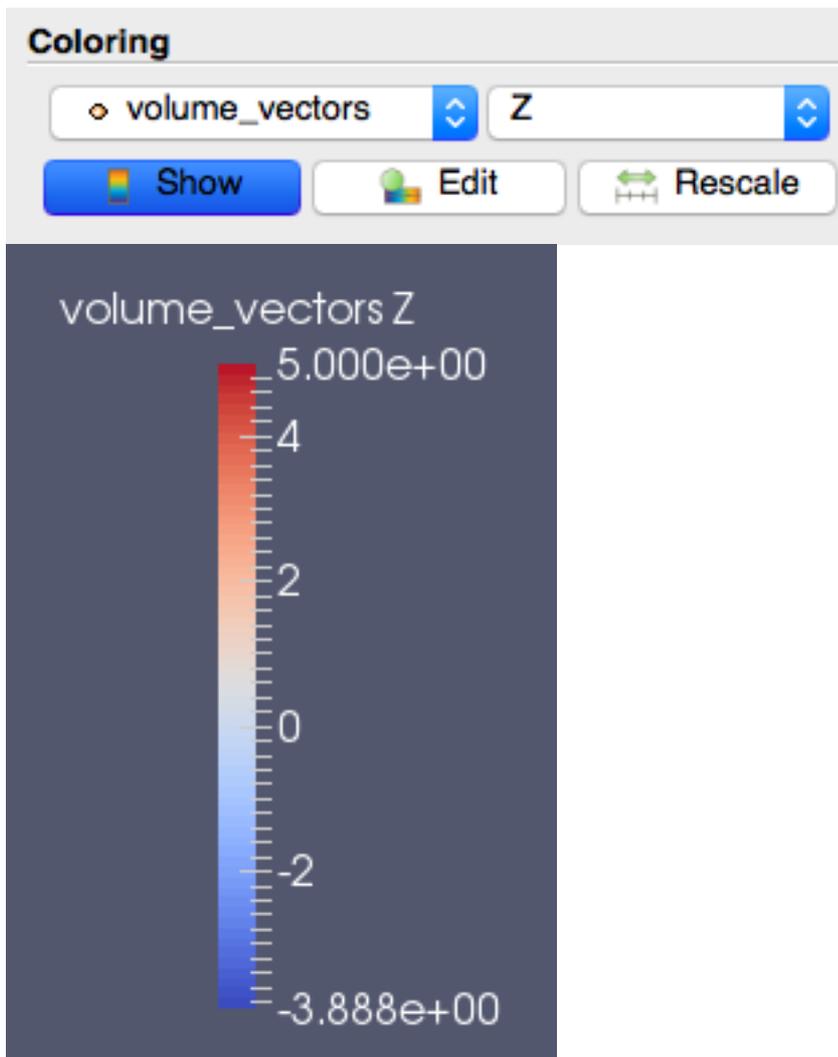
Animation Duration is how long movie length do you want to create.

Frame Rate is number of frames per second.

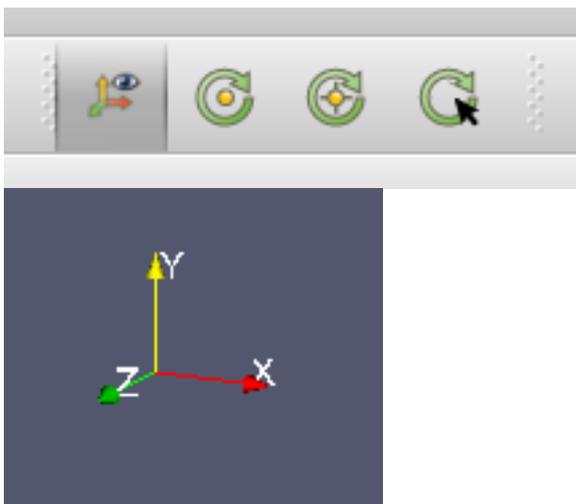
Number Of Frames is calculated automatically(Animation Duration * Frame Rate).

If your camera doesn't move, you don't need to think about fps and an animation mode. But when your camera moves, consider about fps and an animation mode carefully.

Color bar is enabled/disabled by [Show] button.

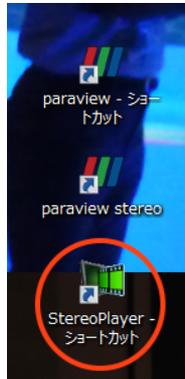


Axis arrow is enable/disable [Show Orientation Axis] button.

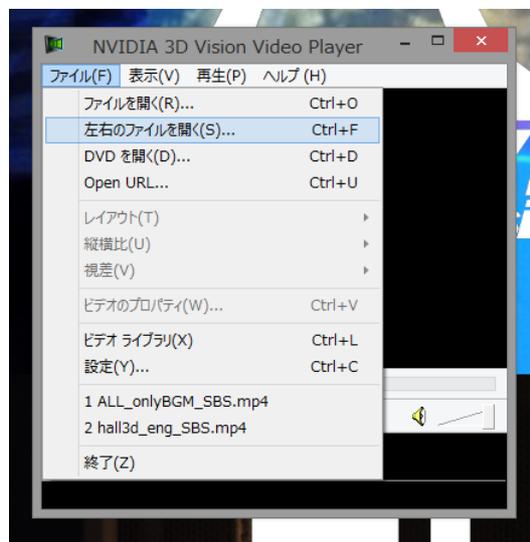


How to watch your stereoscopic movies with NVIDIA 3D VISION VIDEO PLAYER

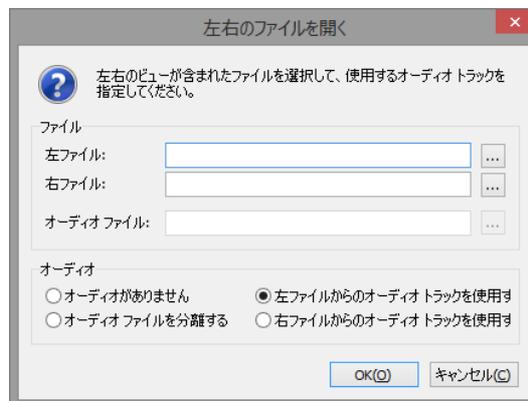
1. Seat in front of our stereoscopic enabled computers.
2. Double click the shortcut icon of NVIDIA 3D VIDEO PLAYER on Desktop.



3. Click **ファイル**(File)->**左右のファイルを開く**(Open Left and Right movies)



4. Choose your movie for Left eye. If filename suffix is **_L** and **_R**, the movie for Right eye is chosen automatically.



5. Push button of left side of 3D glasses to power on, and play your movie.

appendix. how to create shortcut for final presentations

1. Create a shortcut of NVIDIA VIDEO PLAYER
2. Right click the shortcut and click **プロパティ**(property)
3. Add arguments

e.g.)

```
"C:\Program Files (x86)\NVIDIA Corporation\NVIDIA 3D Vision Video  
Player\StereoPlayer.exe" -left /path/to/movie_L.mp4 -right /path/to/movie_R.mp4  
-ol:OpenGL
```

http://www.3dtv.at/products/player/CommandLineParams_en.aspx

Dive into CAVE VR. Kobe University

If you use ParaView for visualization, it's very easy that you dive into your simulation data.

Please ask me the details of immersive ParaView.

If bounds of your data is so small or large, please scale up or down to about -1.5 ~ 1.5 (delta about 3). Immersive ParaView display the data as is. Immersive ParaView's near far clipping is so bad.

To scale bounds, use Calculator filter from Python Shell.

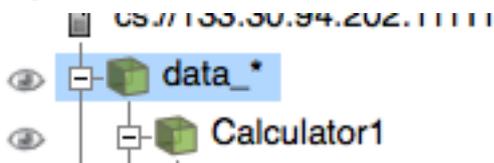
You can see Python Shell in Tool menu.

Type the statement below and press enter key.

```
paraview.simple.Calculator(Input=FindSource('dataname'), CoordinateResults=1)
```

dataname is the name of your data in ParaView.

e.g.) In this case, dataname is “ data_* ”.

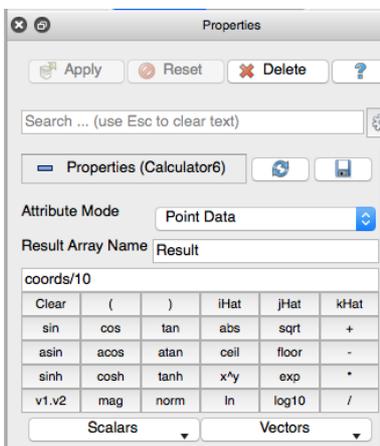


CoordinateResults=1 is important, but you cannot set this property by GUI.

If an error occurred, insert D3 filter between your data and calculator to translate data type.

And type “coords*scale” into the text box and apply.

e.g.) In this case, coords/10



Properties Information

Information

Filename: gale_square_3_40_4.vtk
Path: /media/qnap/ESA_Mars

Statistics

Type: Polygonal Mesh
Number of Cells: 685
Number of Points: 470600
Memory: 15 MB

Data Arrays

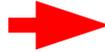
| Name | Data Type | Data Ranges |
|---------|--------------|-------------|
| texture | unsigned int | [0, 255] |

Bounds

X range: 0 to 2.06e+05 (delta: 2.06e+05)
Y range: 0 to 2.07e+05 (delta: 2.07e+05)
Z range: -1.87e+04 to 5.75e+03 (delta: 2.44e+04)

Time

| Index | Value |
|-------|-------|
|-------|-------|



Properties Information

Information

Filename: gale_square_3_40_4_1e-05.vtk
Path: /media/qnap/ESA_Mars

Statistics

Type: Polygonal Mesh
Number of Cells: 685
Number of Points: 470600
Memory: 15 MB

Data Arrays

| Name | Data Type | Data Ranges |
|---------|--------------|-------------|
| texture | unsigned int | [0, 255] |

Bounds

X range: 0 to 2.06 (delta: 2.06)
Y range: 0 to 2.07 (delta: 2.07)
Z range: -0.187 to 0.0575 (delta: 0.244)

Time

| Index | Value |
|-------|-------|
|-------|-------|