

ncca RenderFarm Tool

Houdini: IFD Generation and Rendering

Constantinos Glynos

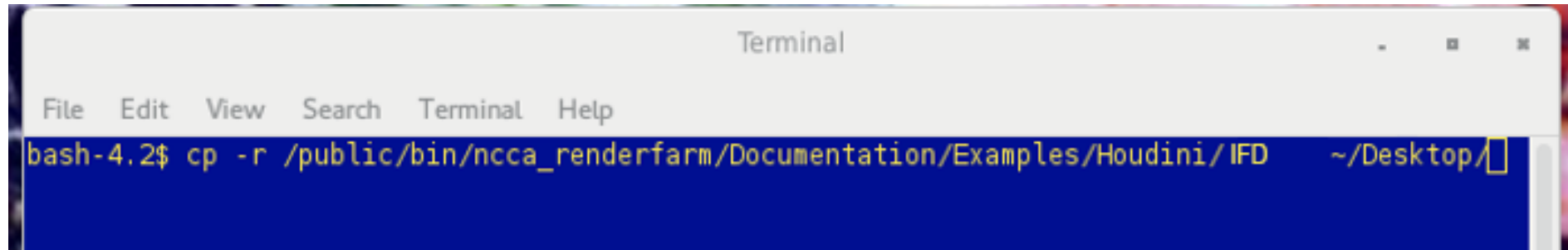
Michail Agoulas



Copy the example scene

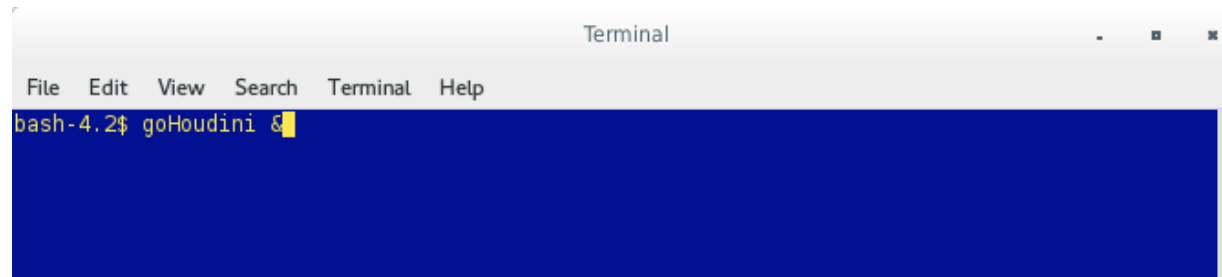
run the copy (cp) command with the recursive flag (-r)

```
cp -r /public/bin/ncca_renderfarm/Documentation/Examples/Houdini/IFD ~/Desktop
```



Open Houdini

```
goHoudini &
```



Set project directory

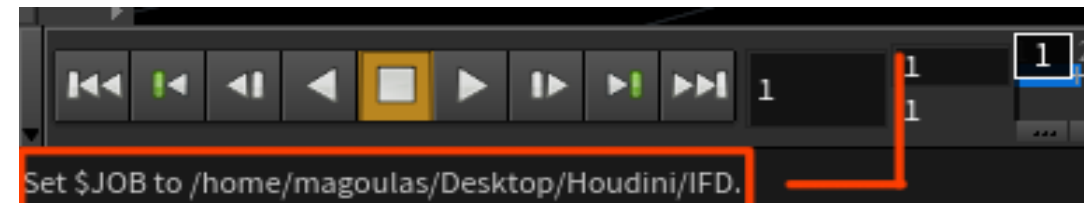
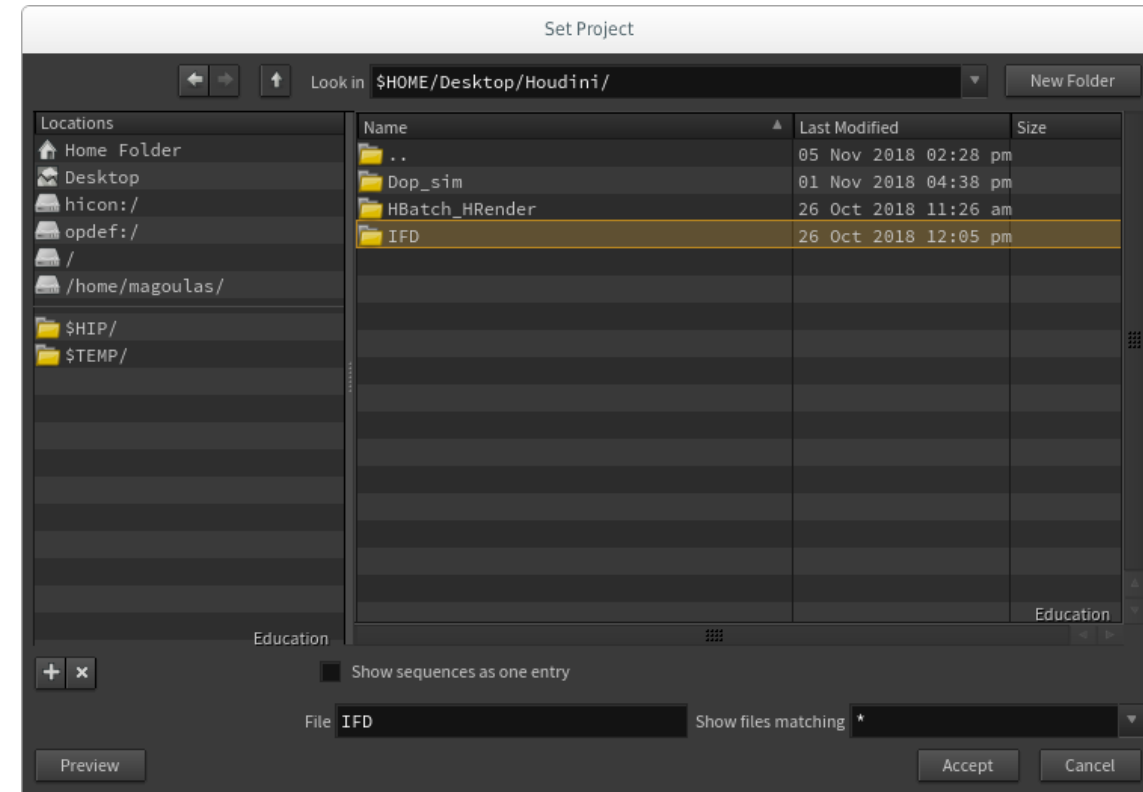
File -> Set Project...

Select the directory which is parent to all the project data files and folders and click Accept.

Do not dive in the directory that you plan to store your .hip projects and project files.

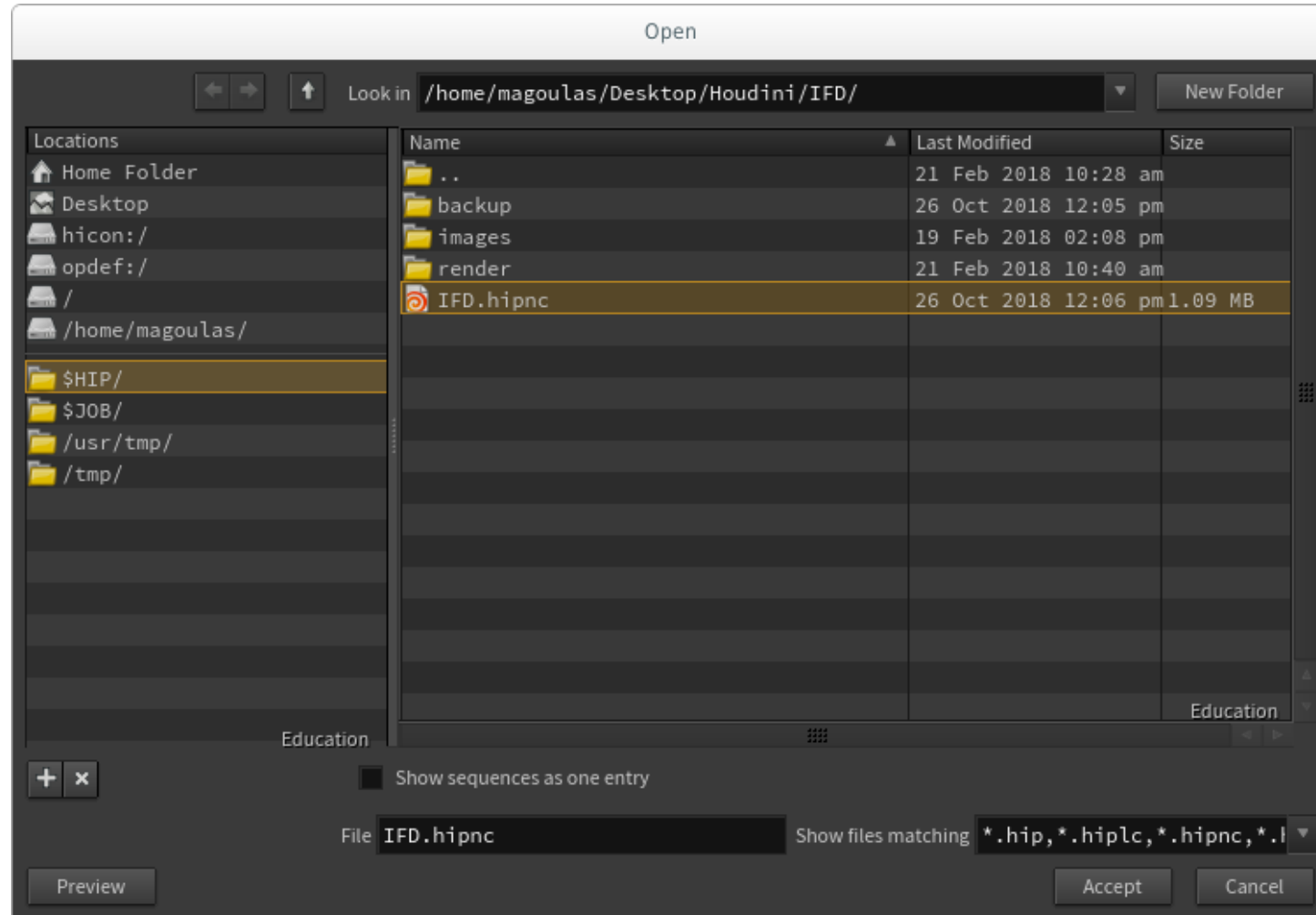
Click [Accept](#)

Now Houdini has set the folder of your project as the root folder.



Open the example scene

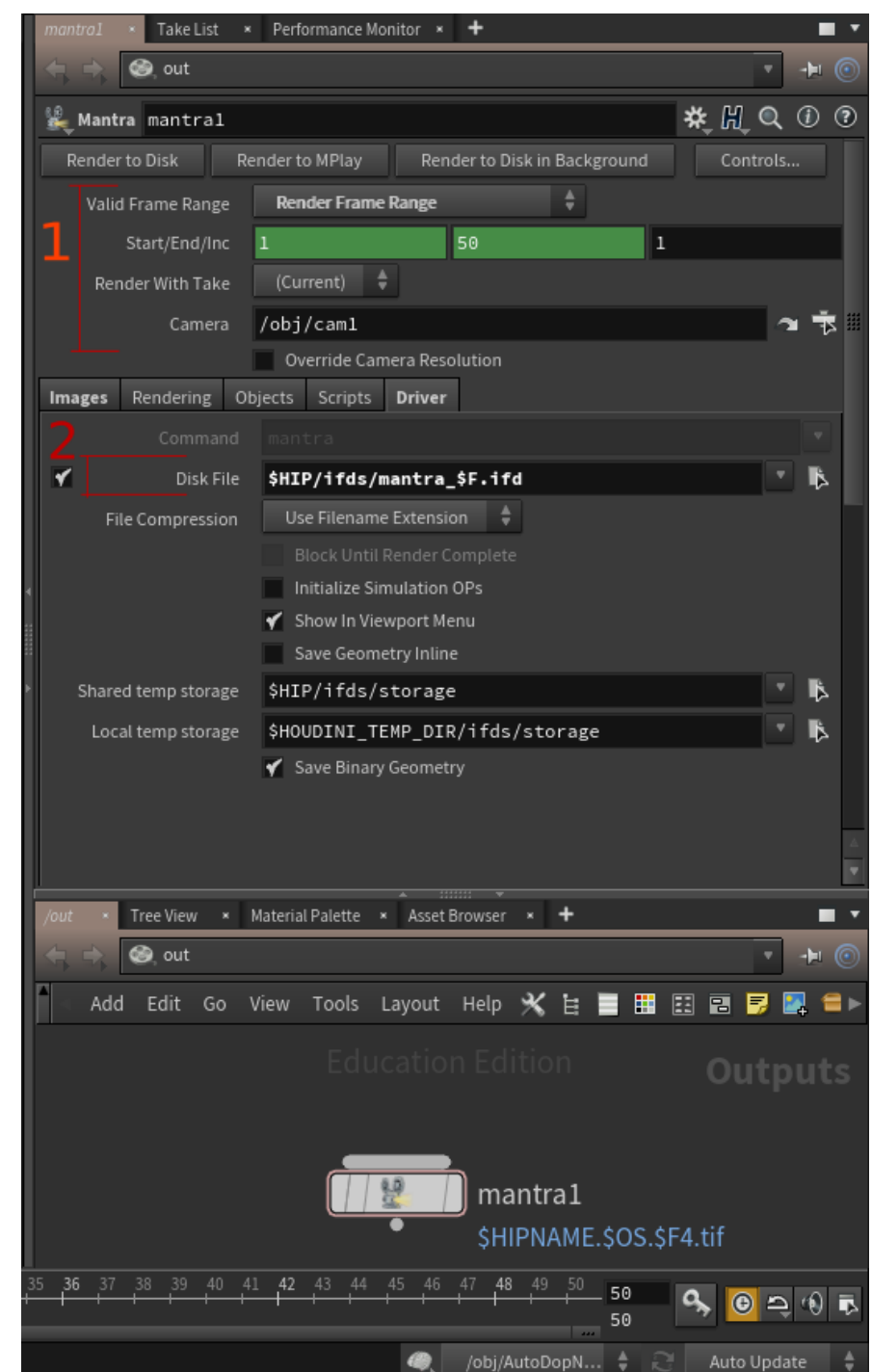
File -> Open -> IFD.hipnc



Check OUT/Mantra Settings

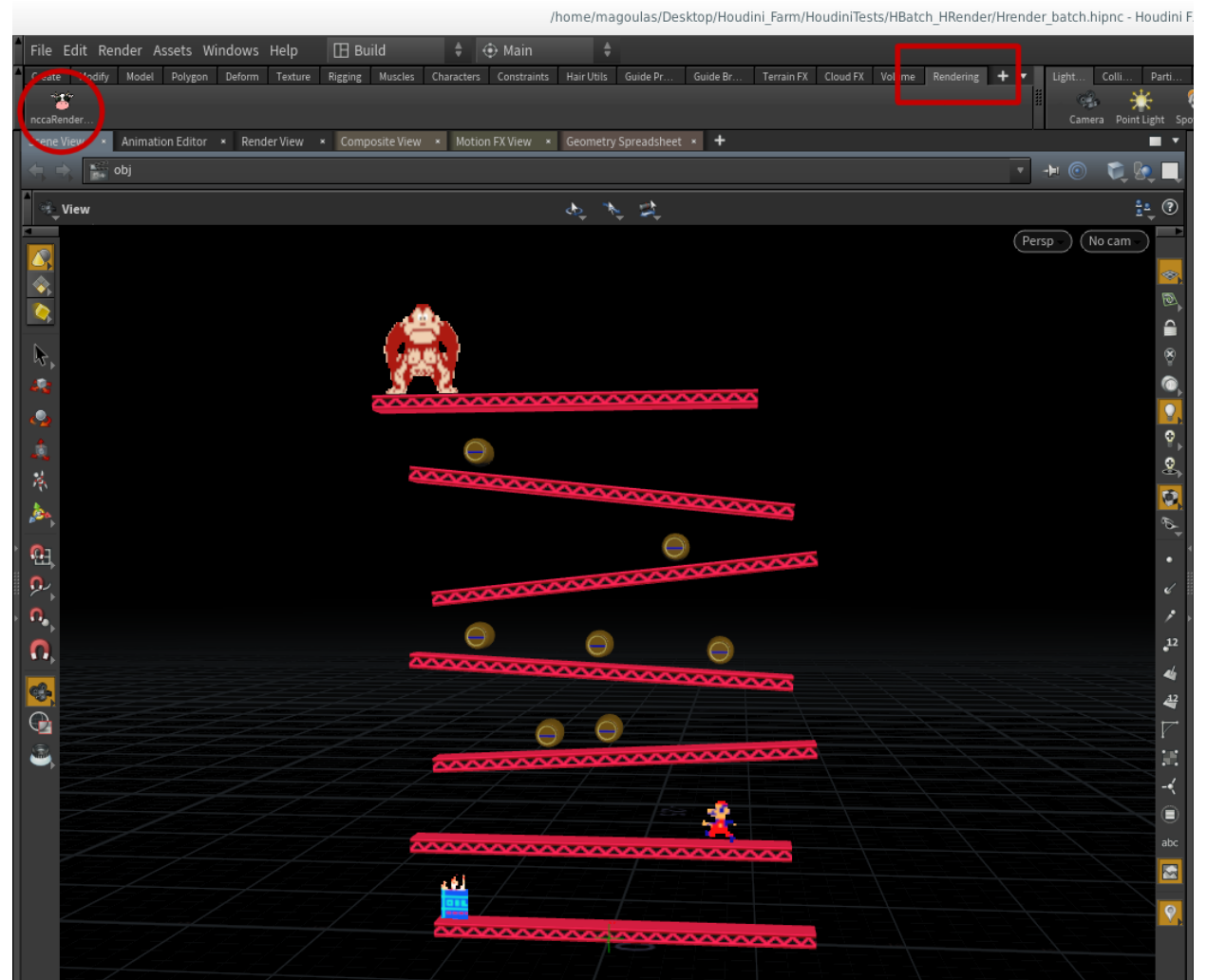
Check that your Mantra node settings are correct:

1. Select the desirable frame range, Take and Camera
2. Go to the "Driver" tab and set the folder where your IFD sequence will be stored. Make sure to use the \$F string if you are rendering multiple frames.



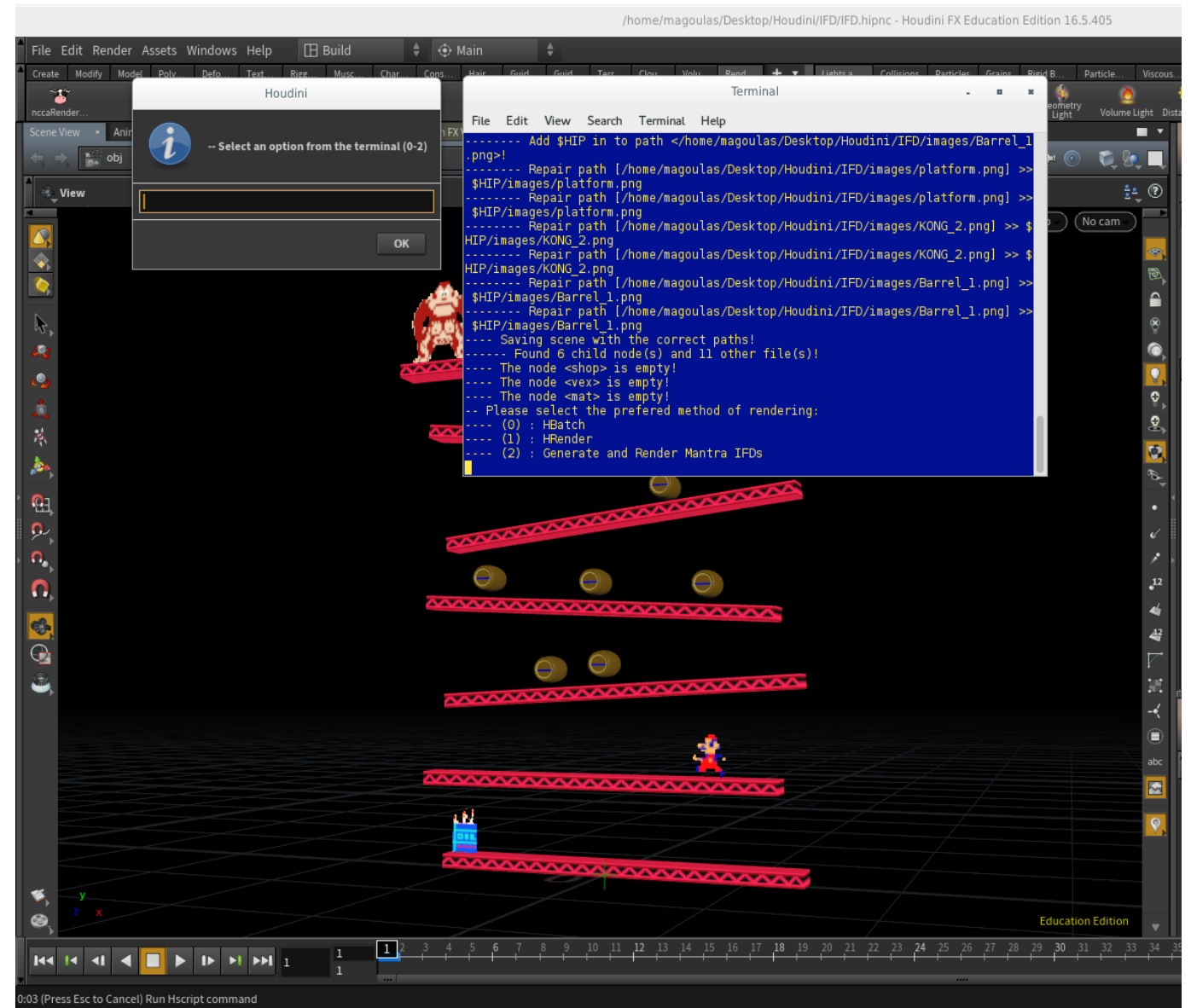
Let's Render

- Press **Ctrl + S** to save the scene
- Go to the **rendering shelf**
- Hit the cow!



Using the tool

- Check your local disk space (quota), or **skip** if not needed.
- Check the **terminal** for any warnings about the version of the tool you are using.
- We will choose the option (2) (Generate and render mantra IFDs)



Using the tool

- Now the tool will ask you to enter your user password in order to connect to the tete server. It is the same as your student account.
- Once you enter your password the tool will ask you one more time before it starts uploading the project folder.
- Do not interrupt this process nor continue working on your project.

```
> Start Frame: 1
> End Frame: 50
> Frame Padding: 4
> Renderer Node: mantra1
> Ifd info: ['False', '$HIP/ifds/mantra_$F.ifd', '1']
> Server: magoulas@tete:/home/magoulas

***** PLEASE DO NOT CONTINUE TO WORK ON YOUR PROJECT WHILE YOU ARE RUNNING THE R
ENDERFARM TOOL *****

-- Connecting to tete server.
Password: █
```

```
connected to tete.
Changing to: /home/magoulas
sftp> put -r /home/magoulas/Desktop/Houdini/IFD
Uploading /home/magoulas/Desktop/Houdini/IFD/ to /home/magoulas/IFD
Entering /home/magoulas/Desktop/Houdini/IFD/
/home/magoulas/Desktop/Houdini/IFD/IFD.hipnc 100% 1115KB 1.1MB/s 00:01
Entering /home/magoulas/Desktop/Houdini/IFD/backup
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:01
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 0% 0 0.0KB/s --:-- ETA █
```


Using the tool

- Once the files are uploaded, the tool will prompt for a quota check on the server.
- If you do not have enough disk space (quota) available on the server, your renders will not be saved anywhere.
- [Skip](#) online quota check if you are sure you have enough space available.

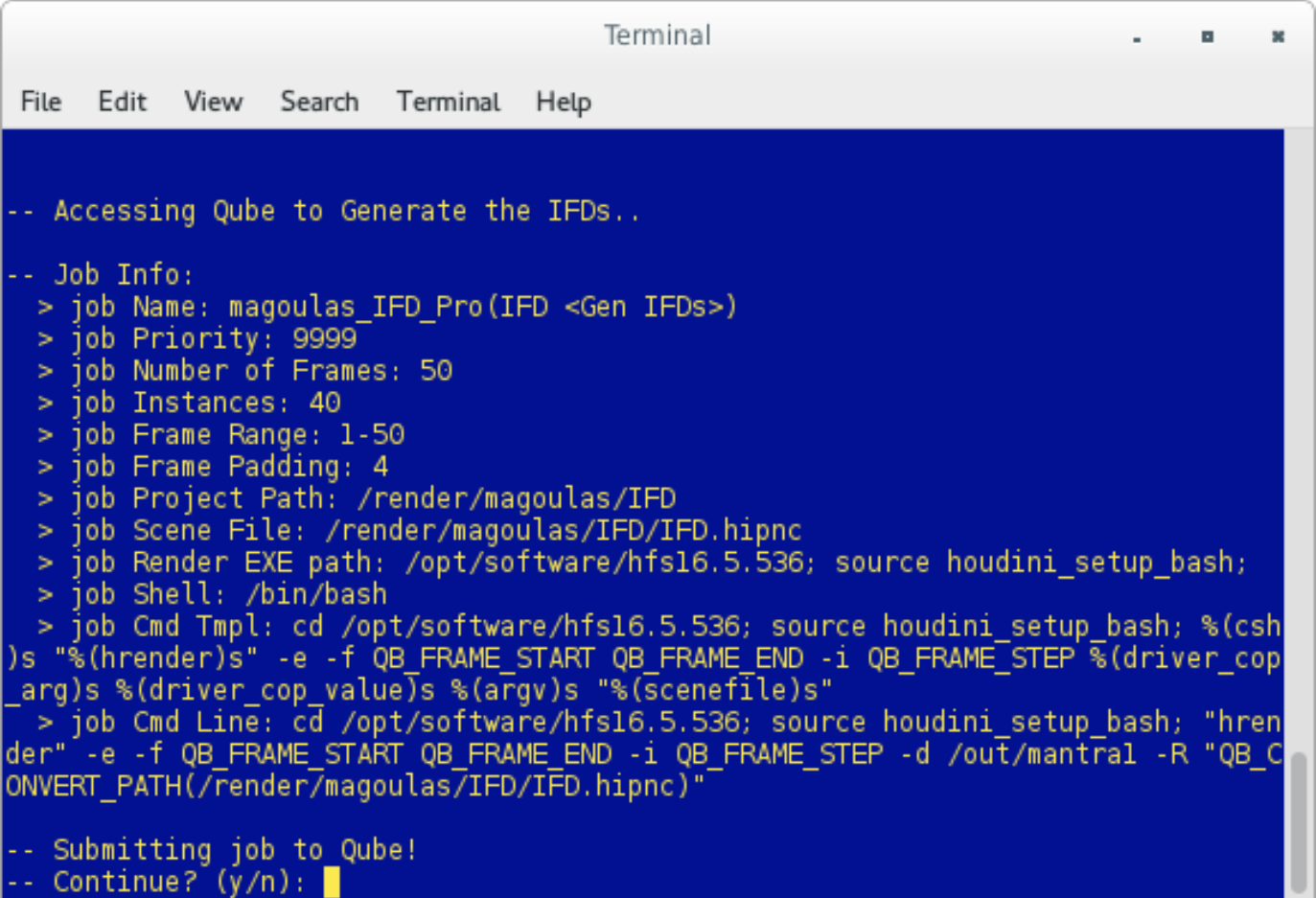
```
Terminal
File Edit View Search Terminal Help
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1113KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1116KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1115KB 1.1MB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/backup/IFD 100% 1115KB 1.1MB/s 00:00
Entering /home/magoulas/Desktop/Houdini/IFD/render
Entering /home/magoulas/Desktop/Houdini/IFD/images
/home/magoulas/Desktop/Houdini/IFD/images/mar 100% 256 0.3KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/mar 100% 239 0.2KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/mar 100% 217 0.2KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/pla 100% 114 0.1KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/Bar 100% 378 0.4KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/KON 100% 639 0.6KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/KON 100% 636 0.6KB/s 00:00
/home/magoulas/Desktop/Houdini/IFD/images/KON 100% 650 0.6KB/s 00:00

-- Upload complete!

-- Disk Quota Check (Recommended)
---- Would you like to check your disk quota before rendering? (y/n):
```

Using the tool

- Press **Y** for the IFD generation process to start.
- Once the IFD generation is complete, press **Y** to send the render job to Qube and begin rendering.



```
Terminal
File Edit View Search Terminal Help

-- Accessing Qube to Generate the IFDs..

-- Job Info:
> job Name: magoulas_IFD_Pro(IFD <Gen IFDs>)
> job Priority: 9999
> job Number of Frames: 50
> job Instances: 40
> job Frame Range: 1-50
> job Frame Padding: 4
> job Project Path: /render/magoulas/IFD
> job Scene File: /render/magoulas/IFD/IFD.hipnc
> job Render EXE path: /opt/software/hfs16.5.536; source houdini_setup_bash;
> job Shell: /bin/bash
> job Cmd Tmpl: cd /opt/software/hfs16.5.536; source houdini_setup_bash; %(csh
)s "%(hrender)s" -e -f QB_FRAME_START QB_FRAME_END -i QB_FRAME_STEP %(driver_cop
_arg)s %(driver_cop_value)s %(argv)s "%(scenefile)s"
> job Cmd Line: cd /opt/software/hfs16.5.536; source houdini_setup_bash; "hren
der" -e -f QB_FRAME_START QB_FRAME_END -i QB_FRAME_STEP -d /out/mantral -R "QB_C
ONVERT_PATH(/render/magoulas/IFD/IFD.hipnc)"

-- Submitting job to Qube!
-- Continue? (y/n):
```

Using the tool

- **Wrangle** your render files from the terminal.
- At this point you can **safely close the terminal** and wrangle your render from **Qube**. But it's advised that you leave the terminal open.
- Now we **wait** for it to finish.
- You can **now continue** to work on your scene.

```
Terminal
```

	File	Edit	View	Search	Terminal	Help
-worker< 02 >	-->	pending	-instance< 01 >	-->	running	
-worker< 03 >	-->	pending	-instance< 02 >	-->	running	
-worker< 04 >	-->	pending	-instance< 03 >	-->	running	
-worker< 05 >	-->	pending	-instance< 04 >	-->	running	
-worker< 06 >	-->	pending	-instance< 05 >	-->	running	
-worker< 07 >	-->	pending	-instance< 06 >	-->	running	
-worker< 08 >	-->	pending	-instance< 07 >	-->	pending	
-worker< 09 >	-->	pending	-instance< 08 >	-->	pending	
-worker< 10 >	-->	pending	-instance< 09 >	-->	pending	
-worker< 11 >	-->	pending	-instance< 10 >	-->	pending	
-worker< 12 >	-->	pending	-instance< 11 >	-->	pending	
-worker< 13 >	-->	pending	-instance< 12 >	-->	pending	
-worker< 14 >	-->	pending	-instance< 13 >	-->	pending	
-worker< 15 >	-->	pending	-instance< 14 >	-->	pending	
-worker< 16 >	-->	pending	-instance< 15 >	-->	pending	
-worker< 17 >	-->	pending	-instance< 16 >	-->	pending	
-worker< 18 >	-->	pending	-instance< 17 >	-->	pending	
-worker< 19 >	-->	pending	-instance< 18 >	-->	pending	
-worker< 20 >	-->	pending	-instance< 19 >	-->	pending	
-worker< 21 >	-->	pending	-instance< 20 >	-->	pending	
-worker< 22 >	-->	pending	-instance< 21 >	-->	pending	
-worker< 23 >	-->	pending	-instance< 22 >	-->	pending	
-worker< 24 >	-->	pending	-instance< 23 >	-->	pending	
-worker< 25 >	-->	pending	-instance< 24 >	-->	pending	
-worker< 26 >	-->	pending	-instance< 25 >	-->	pending	
-worker< 27 >	-->	pending	-instance< 26 >	-->	pending	
-worker< 28 >	-->	pending	-instance< 27 >	-->	pending	
-worker< 29 >	-->	pending	-instance< 28 >	-->	pending	
-worker< 30 >	-->	pending	-instance< 29 >	-->	pending	
-worker< 31 >	-->	pending	-instance< 30 >	-->	pending	
-worker< 32 >	-->	pending	-instance< 31 >	-->	pending	
-worker< 33 >	-->	pending	-instance< 32 >	-->	pending	
-worker< 34 >	-->	pending	-instance< 33 >	-->	pending	
-worker< 35 >	-->	pending	-instance< 34 >	-->	pending	
-worker< 36 >	-->	pending	-instance< 35 >	-->	pending	
-worker< 37 >	-->	pending	-instance< 36 >	-->	pending	
-worker< 38 >	-->	pending	-instance< 37 >	-->	pending	
-worker< 39 >	-->	pending	-instance< 38 >	-->	pending	
-worker< 40 >	-->	pending	-instance< 39 >	-->	pending	
----- final frames(running) : final instances(running)						

Finishing off

- Once the renders are **complete**, the tool will prompt you to **open the project directory** on the server.
- Type **y** and **Enter** so that the tool can **open your project directory on the server**. Otherwise, type **n** and **Enter**.
- You might get asked to enter your student account credentials. **Enter** them so you can get access to the server.
- Navigate in the render folder and copy the file sequence to your computer.

```
-worker< 00 > --> None | -instance< 15 > --> complete
-worker< 00 > --> None | -instance< 16 > --> complete
-worker< 00 > --> None | -instance< 17 > --> complete
-worker< 00 > --> None | -instance< 18 > --> complete
-worker< 00 > --> None | -instance< 19 > --> complete
-worker< 00 > --> None | -instance< 20 > --> complete
-worker< 00 > --> None | -instance< 21 > --> complete
-worker< 00 > --> None | -instance< 22 > --> complete
-worker< 00 > --> None | -instance< 23 > --> complete
-worker< 00 > --> None | -instance< 24 > --> complete
-worker< 00 > --> None | -instance< 25 > --> complete
-worker< 00 > --> None | -instance< 26 > --> complete
-worker< 00 > --> None | -instance< 27 > --> complete
-worker< 00 > --> None | -instance< 28 > --> complete
-worker< 00 > --> None | -instance< 29 > --> complete
-worker< 00 > --> None | -instance< 30 > --> complete
-worker< 00 > --> None | -instance< 31 > --> complete
-worker< 00 > --> None | -instance< 32 > --> complete
-worker< 00 > --> None | -instance< 33 > --> complete
-worker< 00 > --> None | -instance< 34 > --> complete
-worker< 00 > --> None | -instance< 35 > --> complete
-worker< 00 > --> None | -instance< 36 > --> complete
-worker< 00 > --> None | -instance< 37 > --> complete
-worker< 00 > --> None | -instance< 38 > --> complete
-worker< 00 > --> None | -instance< 39 > --> complete
----- final frames( complete ) : final instances( complete )

-- Rendering is complete !
---- Open project directory on the server? (y/n) █
```

