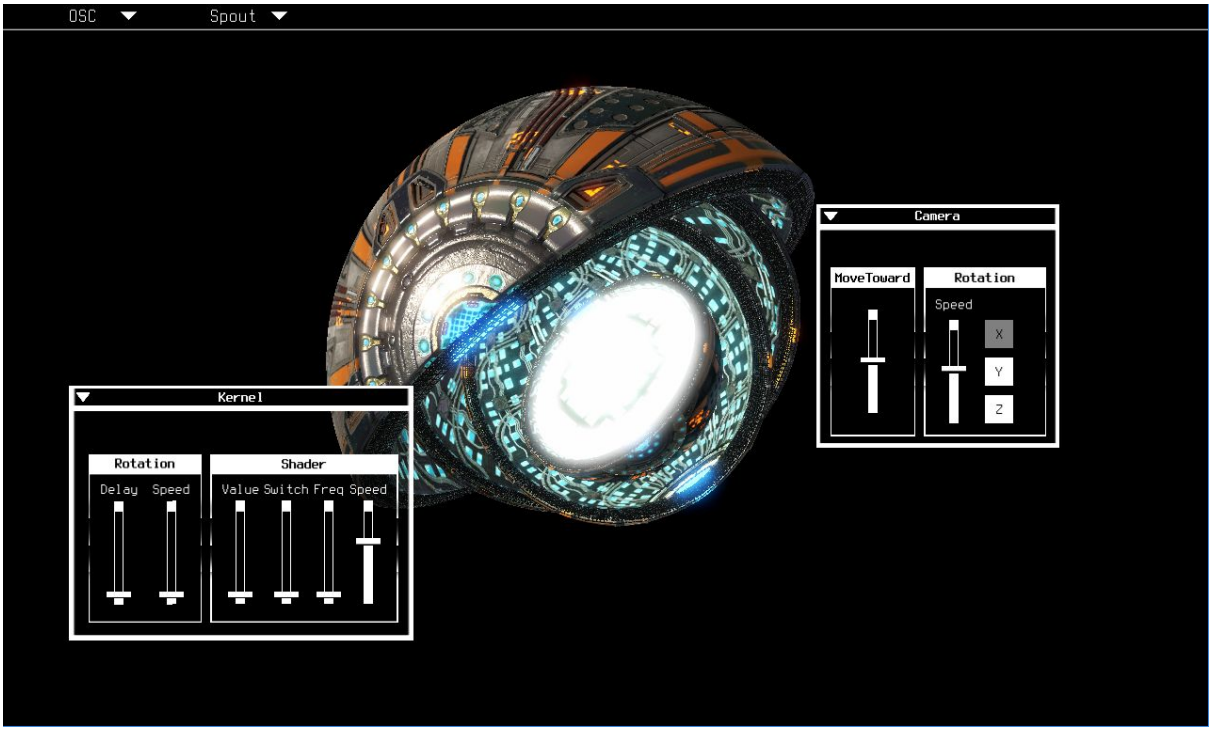
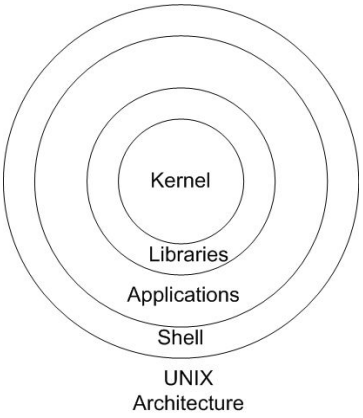
Kernel



1. Presentation

NS_Kernel is a spout-OSC application for VJays. When you are running the application, you can get the result of the application as a video input in any VJing software supporting Spout protocol. You can also control the application through any VJing software able to send OSC at the correct address.
The object of the application has been inspired by the Unix architecture representation based on 4 layers : Shell, Application, Libraries and the deepest before hardware : Kernel layer.



(http://s223195111.mialojamiento.es/images/unix-os-architecture)

2. Installation

■ Step 1 : Install the Application

After unzipping the downloaded file, go into it and start the installer “NSKernelSetup.exe”. Follow the instruction and install it anywhere you want. By default the installation is placed in “Documents\VFXArtShop”.

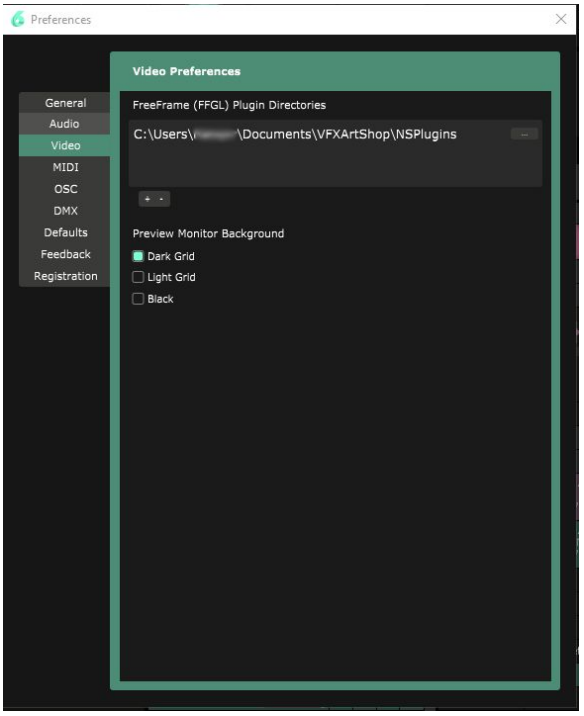
■ Step 2 : Install the OSC controller ffgl

The FFGL plugin is a .dll file that you have to install on your VJing software.
This plugin allows you to control the Kernel application from your VJing software and so give you lots of different ways to control : Midi controller, audio input, bpm sync…

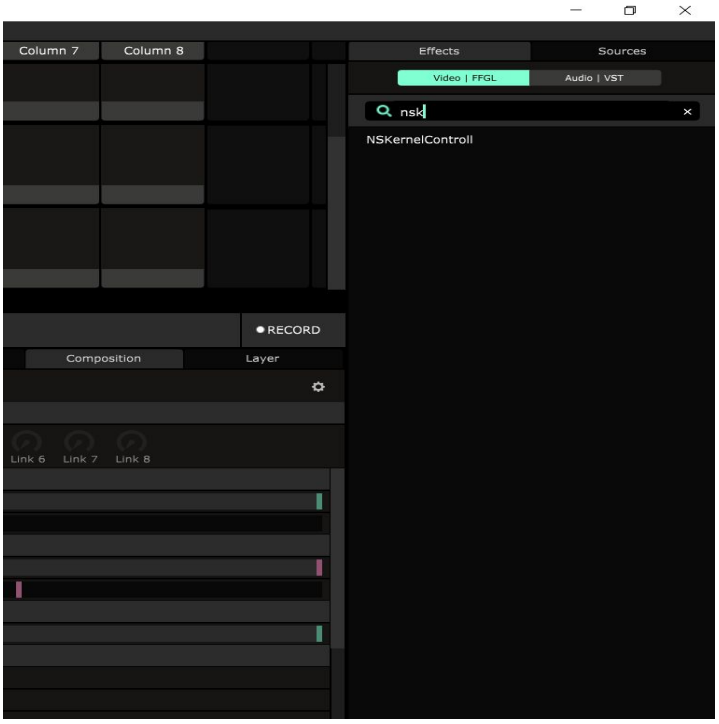
The install procedure may be different for each software. Note that you only need one of the two dll. Check if your software is a 32 or 64-bit application. 32-bit applications are accessible in “ProgramFile x86”. Use NS_ControlKernel_32 for 32-bit software and 64-bit for others. Please check about the procedure to follow for the software you are using.

Here is the Resolume procedure :

- Create a special FFGL folder anywhere you want: in your video loops folder for example, or with some other custom FFGL.
- Place the adapted ‘.dll’ file in this folder. Note that the dll named with “_32” is for Resolume 5, “_64” is for Resolume 6 and later.
- Start Resolume and go to the Preference window (Ctrl +) and video tab.



- Under the FreeFrame (FFGL) Plugin Directories section, click on the ‘+’ button and add the Target path of your new FFGL folder containing the KernelControll dll file.
- Restart resolume and check if you have the new plugin available in the Effect tab like below :



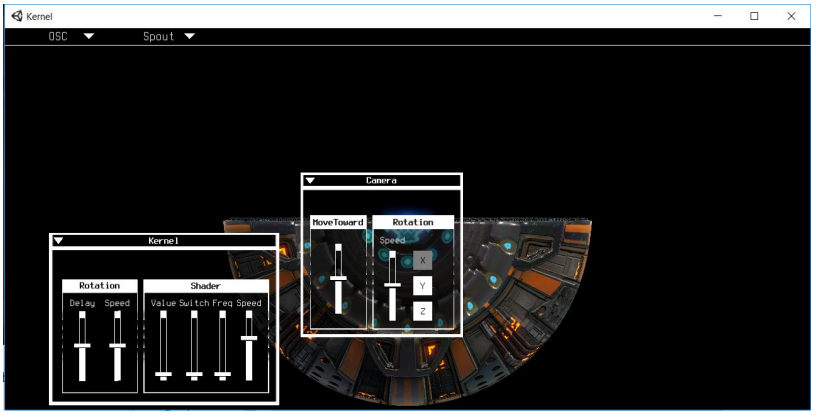
- If you see the new effect that’s done ! Else jump to the support section.

■ Step 3 Start the application !

You’re now ready to use the application ! Check for the next section to know about the functionalities.

3. Utilisation

Once you start the application, you will get this window :



- OSC Connection

Once you have installed the ffgl kernel controller or if your software allows you to send OSC signals to other applications, you have to enable OSC input from the OSC menu like below :

As you see, the check box Enable OSC is set to off and the default OSC port is set to 7140. This is the incoming port to receive OSC signals from the FFGL “NSKernelController”.

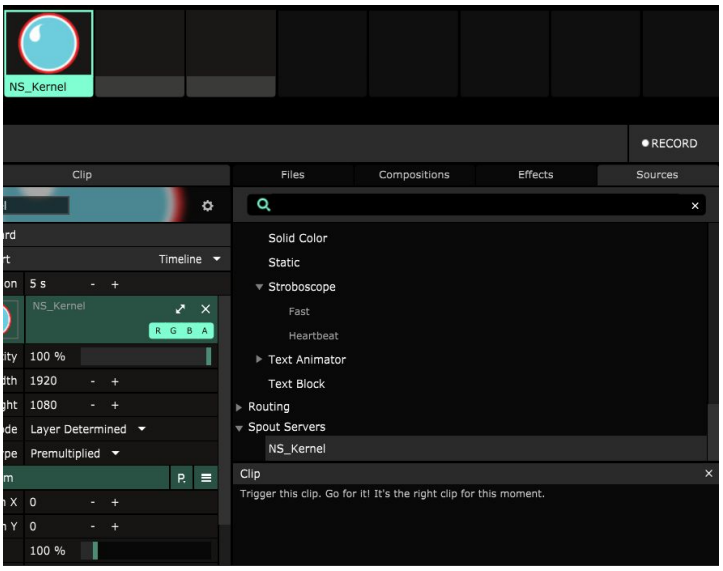
Click on the check box to enable OSC and change the input port if you want to receive OSC from other tools than the FFGL NSKernelController.

If you changed the port number, you can reset it to the default number by removing the input and pressing “enter”.

- Spout video stream

Stream the video :

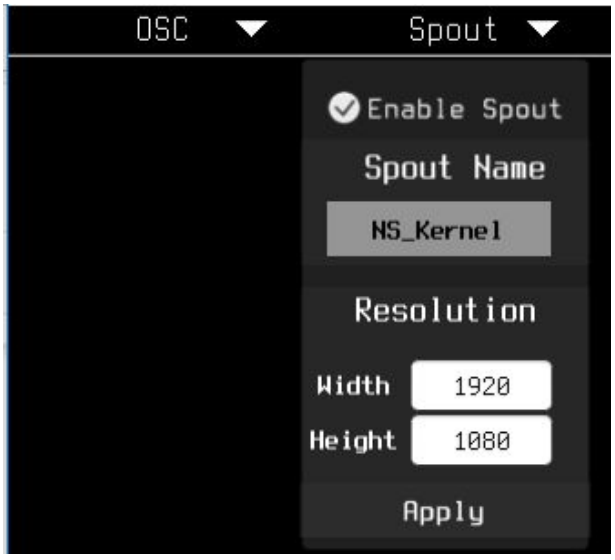
You can stream the output video from this application to your VJay software if it supports Spout protocol. Some VJay softwares support natively Spout protocol such as Resolume 5 and later, so there is nothing else to do. Just start Resolume and see under the “source” tab the new element named “NS_Kernel”.



For other VJ softwares that don't support spout natively, go to the Spout official website and install it to get the video stream : http://spout.zeal.co/

Spout Options :

The application allows you some options concerning the spout video stream :



- **Enable Spout** : Spout protocol is enabled by default. You can disable it whenever you want when you are not using the video stream, if you want optimize your computer performance.
- **Spout Name :** This cannot be changed. It's the spout stream name wich is identified and displayed by other softwares using spout.
- **Resolution** : To get best performances you have to configure the Spout stream resolution to your output VJing composition. By default this is set to 1920*1080 (full hd) but you can change it to what resolution you want. The limit is fixed by your graphics card. You should generate from 640*480 for more stable performance to 4k

resolution and more for a best quality result. After changing the resolution, click to **Apply** to apply the new resolution.

4. Support

This application is using Spout protocole to share video stream over different softwares. If you have problems with spout and the video stream be sure that your graphics card is compatible. New NVDIA graphics cards like GTX960 should work but standard intel graphics cards may have difficulties. To have more information visit this page http://spout.zeal.co/faq/

If you have any problem please contact support@vfxartshop.com or send a message on facebook via https://www.facebook.com/VFXArtShop/

5. Credits

- Spout for Unity

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- Unity OSC Jack

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