

# *Spout to NDI*

<http://spout.zeal.co>

Convert between Spout and Newtek NDI sources.

Using the [Newtek NDI SDK](#)

Version 2.006

"*Spout to NDI*" is a set of programs that allow Spout senders and receivers to share video, not only with each other but also by way of a network using the [NewTek](#) NDI ("Network Device Interface") protocol Version 4.5.

For more information about the NDI protocol see [here](#). This link is also available at any time by selecting Help > About.

# 1. Installation

Unzip "*SPOUTtoNDI\_2006.zip*" in any convenient folder.

## **Folders**

SpoutToNDI\bin – contains the conversion programs

## **Runtime libraries**

Spout to NDI programs are built using Visual Studio 2017 and runtime dll files are included in the \bin folder. All the programs should run without further installations.

However, if you find that the programs still report missing dll's, you may need to install the Visual Studio 2017 runtime manually.

[Download from here](#). Scroll down to find "Microsoft Visual C++ Redistributable for Visual Studio 2017". Download both the x64 and x86 versions. Install the x64 version before the x86 version.

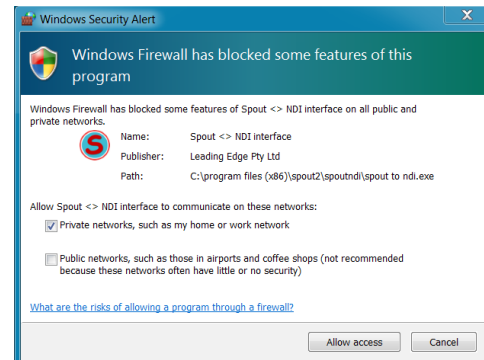
## 2. Operation

### 2.1 SPOUT to NDI

Start a Spout sender, such as the demo sender provided with the Spout installation. Then start "*Spout to NDI.exe*", located in the "bin" folder.

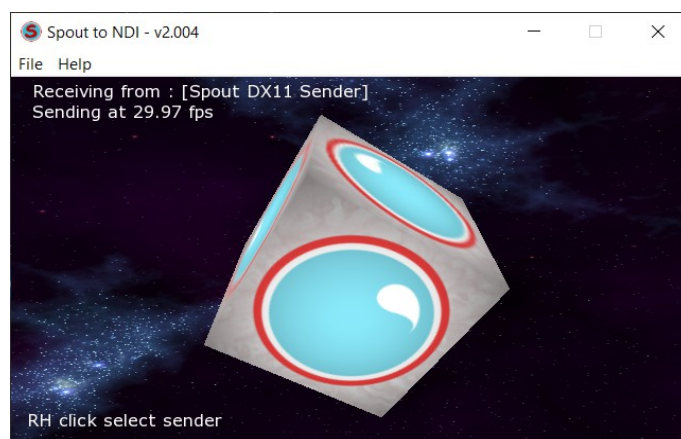
You might receive a warning about Firewall access because it is necessary for data to be transferred across a network.

Allow access as you require.



The demo Spout sender will be immediately selected. Subsequently you can RH click and select other Spout senders.

The sender is now available to any NDI receiver on the network.



To confirm this, start the Newtek Tools "Video Monitor" as as described [below](#).

You can repeat the test on another computer on the same network.

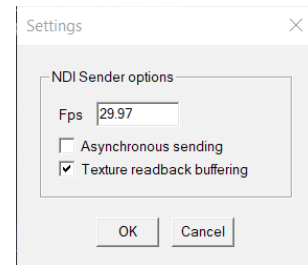
Notice that the name of the sender is preceded by the name of your computer as it is identified on the network.

## Settings

Choose NDI sender options using "File > Settings" from the menu.

### Fps

Enter the frames per second you wish to send to NDI, e.g. 29.97, 25 etc. The sender will be received at that rate.



### Asynchronous sending

This option activates an asynchronous sending mode where frames are sent without waiting until the previous one has been processed. The NDI system manages the buffering and synchronisation. This is the fastest sending method, and will over-ride the entered fps.

### Texture readback buffering

This increases efficiency of the transfer of GPU texture to CPU image pixels required by NDI. Disable this if it causes problems such as stuttering. Otherwise it gives a significant improvement in performance.

## 2.2 NDI to SPOUT

If you have NDI senders running you can receive any one of them and produce a Spout sender which can then be used to share textures between applications on the receiving machine just as they would be on the source machine.

After installation of NDI tools, find the "Test Patterns" application and open it. An NDI sender will then be available on the network. Then start "*NDI to Spout.exe*", located in the "bin" folder.

This can be started on any machine on the network but for testing start it on the source machine.

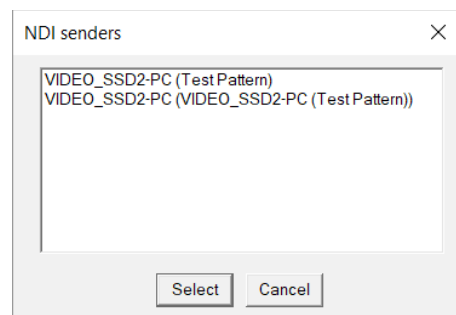
Now the NDI sender test pattern is being received and the output is a Spout sender of the same name preceded by the name of your computer as identified on the network.



Run the Spout demo receiver and you will see it listed. It will also be available in any program that supports Spout input.

### Selecting a sender

Right click to bring up a dialog with a list of NDI senders currently available on the network and select the one you want. In this case you can see the test pattern application as well as "Spout to NDI" which is also running and receiving from "Test pattern"



Sometimes the network may be temporarily unavailable or some other problem and NDI senders might disappear and re-appear in the list. This will not affect the selected sender and when that NDI sender comes back on line, the frames will resume. It may take some seconds for discovery of all the NDI senders on the network.

## 2.3 Magic

"*MagicNDIsender.dll*" and "*MagicNDIreceiver.dll*" are plugins for [Magic Music Visuals](#) for sending to and receiving from NDI applications.

They can be found on the [GitHub repository](#) and downloaded from the releases page. Both 64bit and 32bit versions are available.

Magic does not have NDI support at the time of writing but may in the future, so these plugins could be useful in the meantime.

The modules are compatible with the Magic Version 2.2 and higher. Refer to the documentation in the repository.

## 2.4 NDISyphon

"*NDISyphon*" is the equivalent of "*Spout to NDI*" but for OSX using [Syphon](#) and has been developed as a free utility by [VidVox](#).

OSX machines using "*NDISyphon*" can receive textures from any application with *Syphon* support and share video over a network. Requirements are OSX 10.8+.

On a Mac, start any application with *Syphon* output. Then start "*NDISyphon*" and select the *Syphon* source. The *Syphon* texture will then be transmitted over the network using the Newtek NDI protocol and any machine on that network can access the video.

An OSX receiving machine can then use "*NDISyphon*" to select an NDI source and broadcast this as a *Syphon* texture to any applications on that machine with *Syphon* input.

A Windows receiving machine can use "*NDI to Spout*" to select an NDI source and broadcast this as a *Spout* texture to any applications on that machine with *Spout* input.

Download from [here](#).

## 2.5 NDI tools

Here is a download link for [useful tools](#). After entering your details, you will receive an email with a link to download them.

These include a "Test Pattern" sender, a "Video Monitor" to receive from NDI senders and a "Scan Converter" screen capture application.

## **3. Licencing**

### **3.1 Spout to NDI**

"Spout to NDI" is released under the Simplified BSD licence.

Copyright (C) 2020. Lynn Jarvis, <http://spout.zeal.co/>, All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### **3.2 Newtek NDI**

Newtek NDI ("Network Device Interface") is copyright NewTek, Inc. (<https://www.ndi.tv/>).