Spout to OMT

https://spout.zeal.co

Convert between Spout and OMT sources

Version 1.000

"*Spout to OMT*" is a pair of programs that allow Spout senders and receivers to share video, not only with each other but also by way of a network using OMT (Open Media Transport).

This is an open-source network protocol for high performance, low latency video over a local area network (LAN) and has been designed to support multiple high-definition A/V feeds on a standard gigabit network without any specialised hardware.

Any application that supports Spout texture sharing can then send to or receive from OMT. Conversion from GPU textures is done using high speed compute shaders for minimum overhead that avoids additional latency.

1. Installation

Unzip "*SPOUT to OMT_1000.zip*" in any convenient folder.

Folders

The "Spout to OMT" folder – contains the required programs "*Spout to OMT.exe*" and "OMT *to Spout.exe*".

Runtime libraries

Visual Studio

Spout to OMT programs are built using Visual Studio 2022 with runtime libraries embedded and 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 runtime manually.

Download from here. Scroll down to find "*Other Tools, Frameworks and Redistributables*", then "*Microsoft Visual C++ Redistributable for Visual Studio 2022*". Download and install the x64 version.

OMT

The programs depend upon OMT library functions. The library files "libomt.dll" and "libvmx.dll" are included for versions available at the time of distribution.

If the OMT libraries are subsequently updated and you want to use the new versions, you can download the required files from here.

After download, copy and replace "libomt.dll" and "libvmx.dll" in the distribution folder. The programs will then load the new version. If you encounter any problems, restore the distribution dll files.

2. Operation

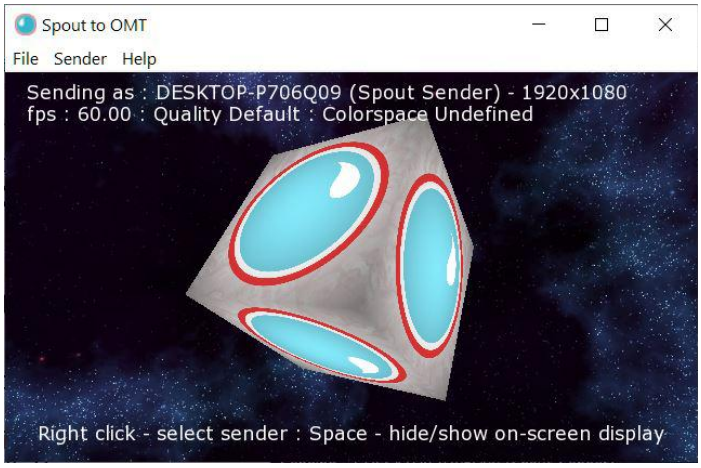
2.1 SPOUT to OMT

Start a Spout sender, such as the demo sender provided with the latest Spout release.

Open "*Spout to OMT.exe*". 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 use : "File > Select source" or press the right mouse button to select other senders.



An OMT sender is produced with the the name of the Spout sender, preceded by the name of your computer as it is identified on the network and is available to any OMT receiver on the network.

To confirm this, open the Open Media Transport Tools "OMT Viewer" either on the local computer or on another computer on the same network.

Data format

OMT encodes video data using the VMX video codec prior to sending over the network. Spout to OMT is an OpenGL application which receives Spout textures of RGBA format. This can be provided to OMT in BGRA format which is high quality and supports alpha transparency.

For increased efficiency, the RGBA data can be converted to UYVY format (8bit 4:2:2), which is half the width, by a high speed shader. This GPU texture is then converted to CPU pixel data for OMT using asynchronous readback. The same process is performed in reverse for OMT to Spout.

Settings

OMT sender options can be changed using the “Sender” and “Help” menus.

Frame rate

The frames per second you wish to send to OMT, e.g. 60, 30 etc.

Select from the drop-down list and click OK. The sender will be received at that rate. Frame rate and resolution both affect the bandwidth required.

Quality

An OMT sender can be set for a quality, Default, Low, Medium or High.

If set to Default, the sender will initially select Medium quality. In this default mode, receivers can request a preferred quality and the sender selects the maximum quality requested from all receivers.

If set to Low, Medium or High, the sender ignores receiver suggestions and produces a stream of that quality. Documentation.

Colorspace

This is used to determine the color space for YUV<>RGB conversions internally, "Undefined", "BT601" or "BT709".

If undefined, the codec assumes BT601 for heights less than 720 and BT709 for everything else.

Logging

OMT produces a log file for an application by default, located in “C:\ProgramData\OMT\logs”.

The folder can be opened with “Help > Logging > Folder”.

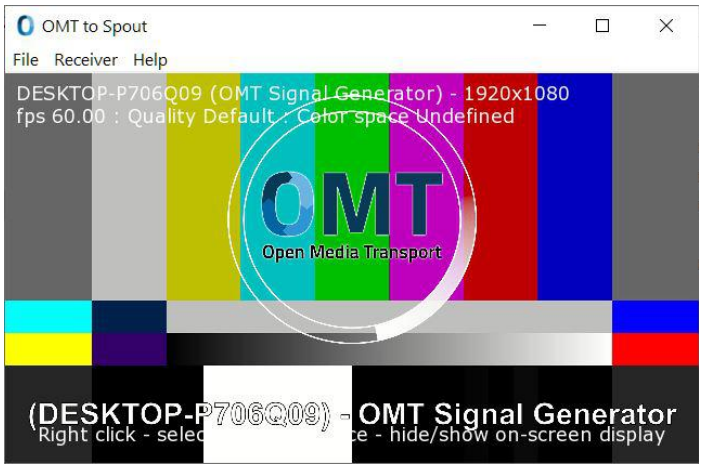
Logging can enabled or disabled and log files for the application or all OMT log files can be cleared.

2.2 OMT to SPOUT

OMT to Spout receives from any OMT sender and produces a Spout sender which can then be used to share textures at high speed between applications on the receiving machine.

Open the "OMT Signal Generator" and click "Start" so that an OMT sender is available. Then open "OMT to Spout.exe".

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

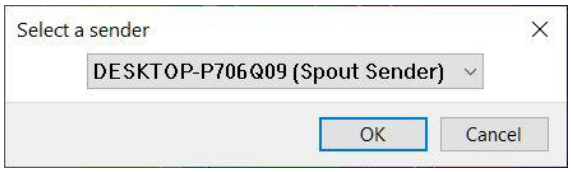


Now the OMT signal generator test pattern is being received and the output is a Spout sender of the same name.

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

"File > Select source" or right mouse click to bring up a dialog with a list of OMT senders currently available on the network. Drop down the list to select the one you want.



Sometimes the network may be temporarily unavailable and senders might disappear and re-appear in the list.

This will not affect the selected OMT sender and when it comes back on line, the frames will resume. It may take some seconds for discovery of all the OMT senders on the network.

2.3 OMT tools for Windows

There are several tools for Windows provided by OMT contributors.

Vmix

vMix Desktop Capture for OMT

OMT Viewer

OMT Matrix Router

OMT Settings Manager

Central Control

OMT signal Generator

3. Licencing

3.1 Spout to OMT

3.2 OMT