WIRECAST 4.1.3

Windows

Tutorial

Telestream

Tutorials

Introduction

The best way to get started using Wirecast is to quickly work through all it's main features. This tour presents a series of three tutorials, each designed to help you understand how to create and broadcast presentations using Wirecast.

As you work through these tutorials, you will also become familiar with important Wirecast concepts and how you can use them to deliver high quality broadcasts. The more you know about Wirecast, the better it will serve your broadcasting objectives.

Because each tutorial builds on the skills and knowledge you learn in the previous tutorials, it is recommend that you take the tours in succession. Working through all the tutorials takes about thirty minutes.

As you gain hands-on experience creating video and audio presentations - which leads to a working knowledge of Wirecast and its components and architecture - you will gain proficiency in using Wirecast.

Tutorials

- Tutorial 1: Basic Concepts
- Tutorial 2: Editing Shots
- Tutorial 3: Broadcasting

Note: You can run all of the tutorials without a license. However, a watermark on the video and an occasional voice-over on the audio are present until a valid license is activated.

Note: For licensing information, select Preferences from the File menu, click the Add (+) button, then click Purchase. Or, contact sales@telestream.net.

Tutorial 1: Basic Concepts

The goal of this tutorial is to provide you with a quick but successful experience creating and broadcasting a presentation using Wirecast. This tutorial requires that you open the tutorial document in Wirecast. To do this, select Create Document for Tutorial from the Help menu in Wirecast. A new window will open as shown below:

Figure 1. Main window in Tutorial

Select Help > Create
Document for Tutorial
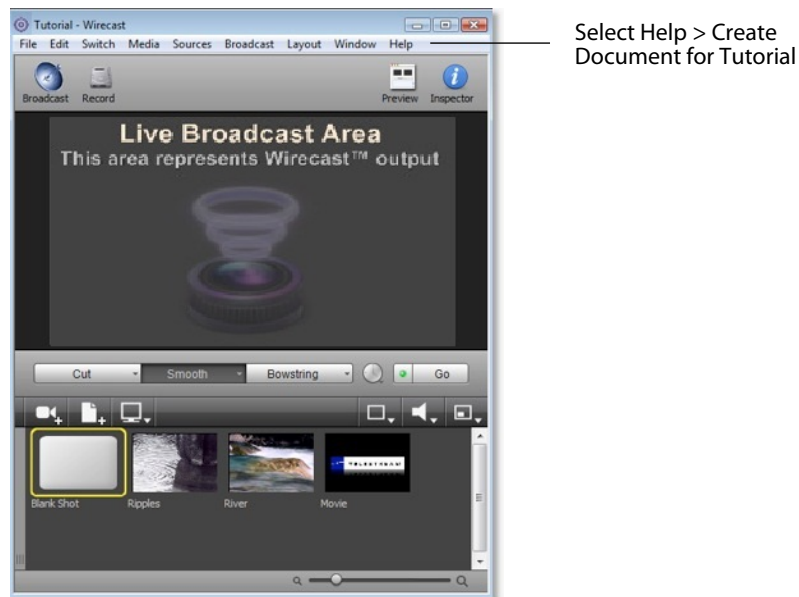
Note: If you are running the tutorial with Wirecast in demonstration mode, the Wirecast logo will appear from time to time and audio output will have a periodic voice-over.
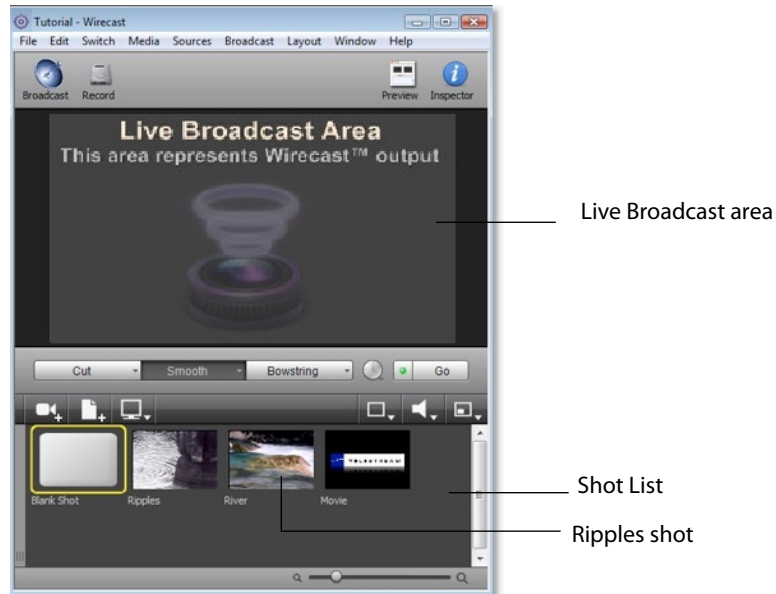
The Main Window

Wirecast has two main display areas: Live Broadcast and Shot List. The Live Broadcast is the large area in the upper portion of the window displaying what Wirecast will

broadcast to your viewers (or record to disk). The Shot List, in the lower half of the window, displays the shots available for broadcast:

Figure 2. Live Broadcast Area and Shot List

What Is a Shot?

Wirecast uses the concept of a shot to construct presentations. A shot contains media, along with the settings for that media. In its simplest form, a shot contains one piece of media such as a photo or a video clip. But it can also be something more complex, like a live camera with a title, and background music.

A shot can be edited and its settings can be changed (See Tutorial 2: Editing Shots). Shots are important because they enable you to configure a lot of information before you broadcast your presentation. This enables you to concentrate on creating a good production during your broadcast.

Switching Between Shots

Individual shots are displayed in the Shot List. Click the Ripples shot in the Shot List area and the image fades into the Broadcast Area display. This is called taking a shot live. Click the shot labeled Blank Shot and the Ripples image fades to a blank screen. The Blank Shot enables you to display nothing, which is sometimes useful.

Transitions and Go Button

Transitions

In the previous examples, a fade occurred when you clicked on a shot. This is because a smooth transition is the default. Transition controls are located just below the

Broadcast Area where three kinds of transitions are shown: Cut, Smooth, and Bowstring.

Figure 3. Transition Control Panel

When Cut is selected, transitions are immediate. When Smooth is selected, transitions fade in (as demonstrated above). Select Bowstring to implement the transition with a wave effect (like a bow string when it is released).

To see the Bowstring effect, Click the River shot to place it in the Broadcast Area. Next, click the Bowstring button. The Transition panel should like this:

Figure 4. Bowstring Transition Control

Now click the Ripples shot. The Ripples shot will appear using the Bowstring (wave) effect.

There are more than just three kinds of transitions to choose from, but only three can be assigned to the Transition Panel. To select a different transition type, click the small arrow on the right side of the transition button. When the list appears, select a new transition to be assigned to this button. You can also click the transition button and drag the mouse downward until a menu of selections is displayed.

For example, change the first button (Cut) to be Swoop by clicking on the Cut button and dragging downward until the menu appears. Next, select Swoop from the menu. Swoop should now be selected for the first button. Now click back and forth between River and Ripples using Swoop.

These three transition buttons can also be selected by using the following key combinations: Ctrl+1, Ctrl+2, and Ctrl+3.

Transition Speed

You can also Control how fast a transition will occur, by clicking the Clock (Transition Speed) icon:

Figure 5. Transition Speed Icon

Click on the clock icon and choose Slow from the menu. When Slow is selected, the clock icon changes to a small turtle, indicating slow mode:

Figure 6. Slow Transition Icon

In Slow mode, when you perform a transition it will occur slower than normal. When faster transitions are selected, the icon changes to display a rabbit.

Go Button

The Go Button (or Ctrl+G) enables you to make a transition occur at any time.

Figure 7. The Go Button

Clicking the Go button does nothing when Wirecast is in its default mode of AutoLive. Later in this tutorial you will discover how to use the Go button to transition between different shots when the AutoLive mode is off.
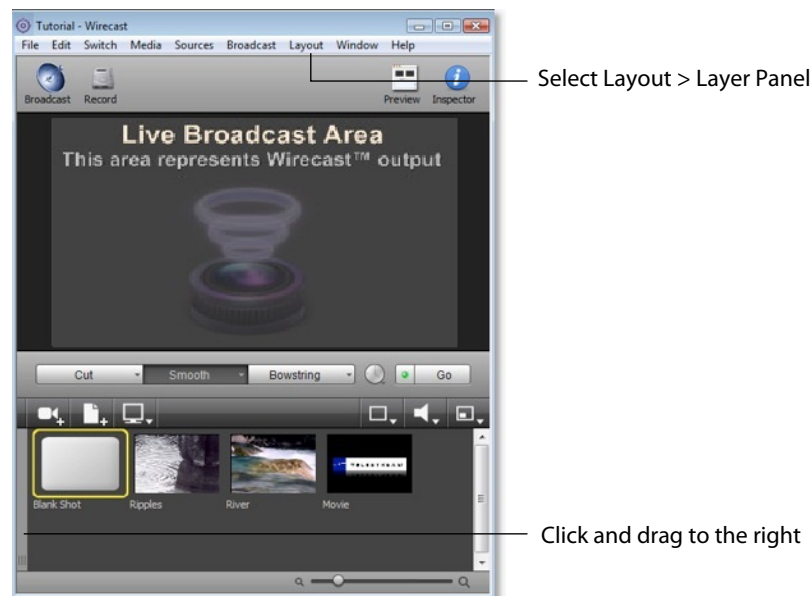
Layers

Note: Before you start this section, please select Smooth as your transition.

Wirecast enables you to use several layers. Layers are different kinds of displays (shots, logos, titles, etc.) placed on top of each other so that all are seen at the same time. It is an excellent way to add and remove objects in your broadcast.

To open the Layer Panel, select Layer Panel from the Layout menu at the top of the Main window. You can also open the Layer Panel by hovering over the narrow grey panel on the left side of the Shot list until a double arrow is displayed, then clicking and dragging to the right until the Layer Panel is displayed:

Figure 8. Two Ways to Open the Layer Panel

Select Layout > Layer Panel

Click and drag to the right

Layers are displayed in a particular order: Master Layer 1 is on top, Master Layer 2 below it, Master Layer 3 below Layer 2, etc. This tutorial, so far, has been operating on Master Layer 3.

Figure 9. Layer Panel Display

Layer Panel
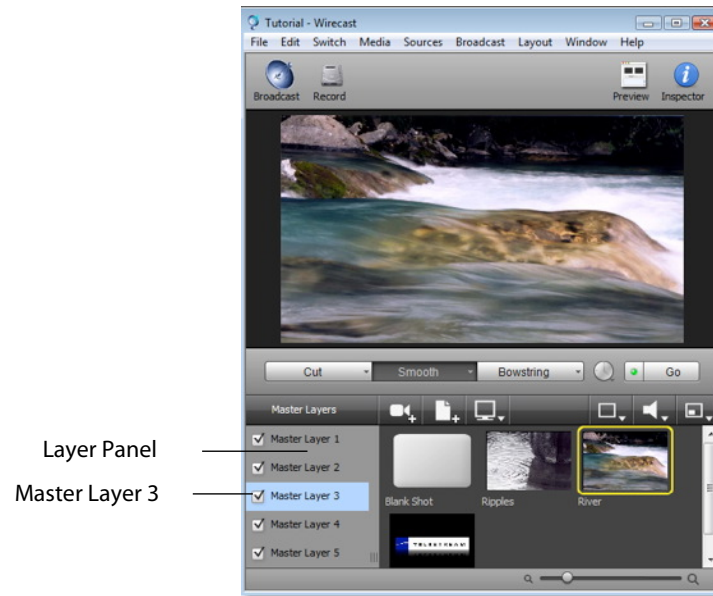
Master Layer 3

Now select Master Layer 2 by clicking it. Each shot is assigned to a particular layer, so when you switch layers you only see the shots that are on that layer. For example, Ripples, River, and Blank shots are on Master Layer 3 (as seen previously in this tutorial), but Master Layer 2 has only a logo and a blank shot.

**Figure 10.** Master Layer 2 Shots
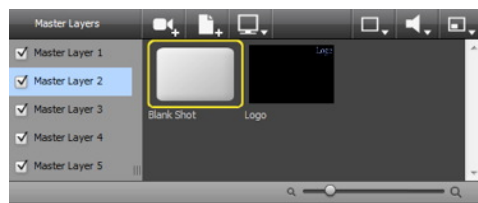
Click on the shot named Logo. Notice that the Logo fades into the top-right corner of the Live Broadcast area:

Figure 11. Logo Shot Added

Layers can also be made invisible by unchecking the checkbox for that layer. Unchecking Master Layer 2 causes the Logo to be removed from the Broadcast area.

Figure 12. An Unchecked Layer

Uncheck to make layer invisible
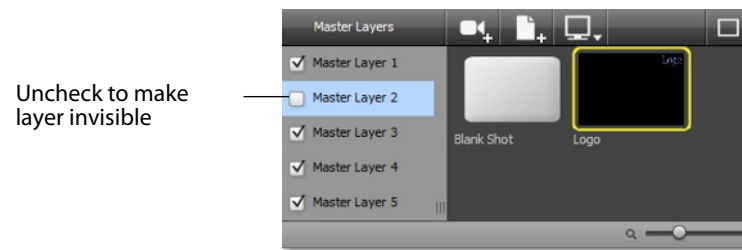
Re-check the Master Layer 2 check box and the Logo will reappear.

Auto Live

Note: Before you start this section, please make sure that all layers are visible (all layer check boxes are checked), and that you are on the Master 3 Layer, which shows Ripples and River shots.

Figure 13. Master 3 Level with All Layers Visible

So far in this Tutorial, Wirecast has been running in AutoLive mode. What this means is that any change you make on the Main window is automatically made live in your Broadcast. This mode is very useful for those users who wish to set up all of their shots at once and then single-click them as they run their presentation. But the disadvantage of this single-click method is that you can only see one shot change at a time. Once you click a shot, your viewers also see it (with no preview of how it will look on your part).

Turn AutoLive Off

Turn AutoLive off by unchecking AutoLive in the Switch menu. A dialog box will be shown informing you that AutoLive mode is off and transitions must be made using the Go button. Click OK in the dialog box to continue.

Try clicking the Ripples and River shots. Nothing happens because AutoLive mode is off. Now click the Ripples shot and click the Go Button. The Ripples shot is taken live in the Broadcast area. Click the River shot and, as expected, nothing happens. Click the Go button and River shot becomes Live.

Note: When AutoLive is off, you must always click the Go button (or press the Ctrl+G keys) to display the selected shot in the Broadcast area.

Multiple Changes

The benefit of having AutoLive off is that you can make several changes first and then have them occur all at the same time. To do this, verify that AutoLive is off and click the Ripples shot (you should still see River in the Live window).

Now click Master Layer 1 in the Layers Panel and click Sample Title. Click the Go button (or Ctrl+G) and notice how both the Ripples shot and the Sample Title shot become Live at the same time.
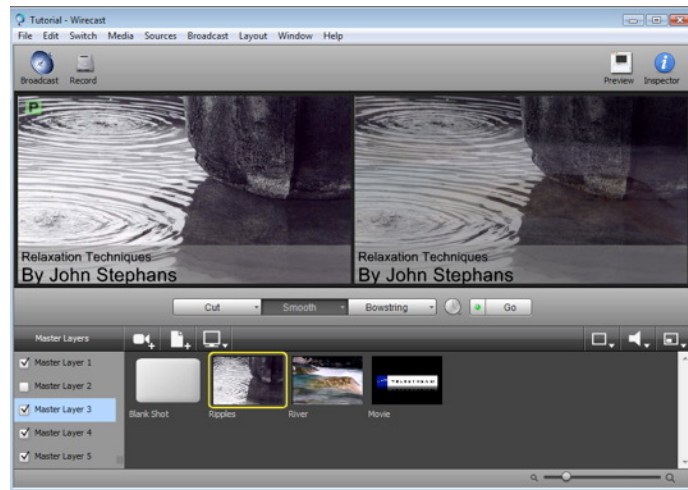
Preview

Note: Before proceeding, make sure Master Layer 3 is selected, and the Ripples shot is also selected.

One issue you may have noticed while running this tutorial is that you cannot see the changes you are making before broadcasting them. To solve this problem, Wirecast enables you to see a Preview of what you will broadcast.

Select Preview from the Layout menu. The Left side of the Main window is the Preview area. Notice that it has a small green square with the letter P inside it. The Right side is the Live Broadcast area as before. Your Main window should now look like this:

Figure 14. Main window with Preview Display

Turn off Master Layer 1 and Master Layer 2 by unchecking both checkboxes. This removes the logo and title from the Preview. Now click the Go button to transition the Preview into the Broadcast area:

Figure 15. Unchecked Master Layers 1 & 2
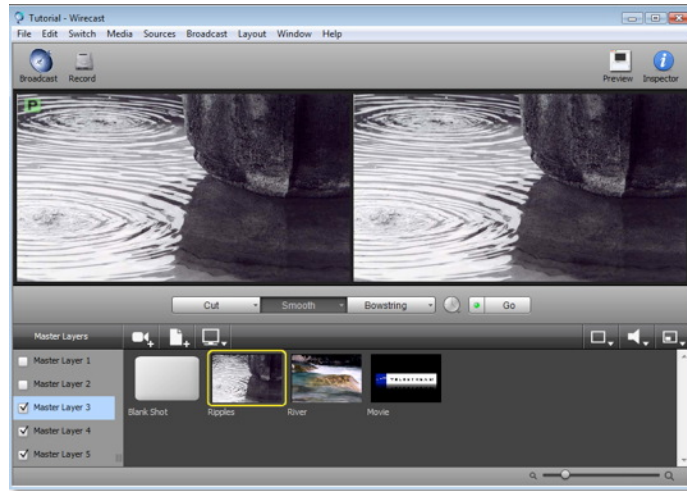
Tutorial 2: Editing Shots

The first tutorial used only the Main window, and explained various ways in which you can use an existing shot. But shots can also be created and edited. This tutorial demonstrates how to edit your shots to meet your presentation needs.

Shots can be configured in different ways. Some shots have only titles and some just a logo, others have only a photo. Shots are created to be used in broadcast presentations. When you broadcast you are choosing, in real time, the shot you wish to display. Shot editing enables you to make shots you need for your broadcast.

Note: Before you start this tutorial, create a new tutorial document by selecting Create Document Tutorial from the Help menu. You should see a new Main window as shown below:

Figure 16. Tutorial Main window

Shot Editor Overview

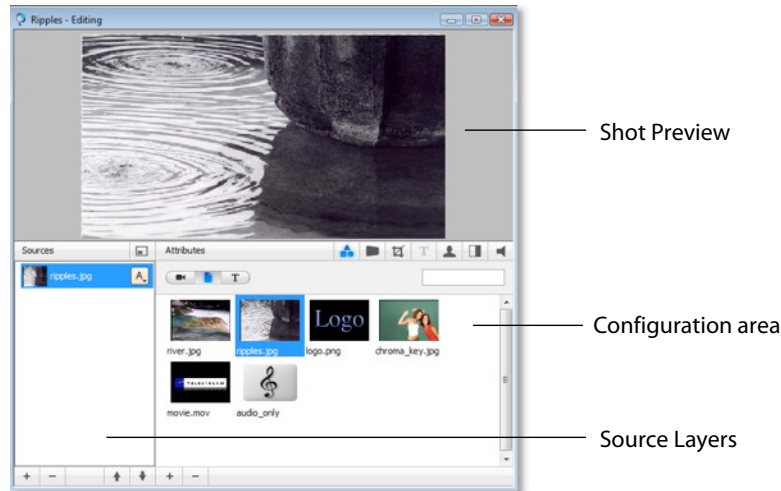Double click the Ripples Shot. This opens the Shot Editor window.

Note: If you save a document with the Shot Editor window open, Wirecast remembers this and will re-open the edit window when the document is re-opened.

The Shot Editor window has three main areas: Shot Preview, Configuration Area, and Source Layers.

Figure 17. Shot Editor window

Shot Preview This area shows exactly what this shot will look like to your viewers when you take this shot live.

Configuration Area This is where you make changes to the content of the shot, and set it's parameters. The configuration area changes appearance depending on the selected Source Layer. Click the source icon in the configuration area and it will become invisible in the Preview.

Source Layers This area enables you to add, remove, and reorder the sources in your shot. Sources are ordered visually from top to bottom. For example, the first source in the Source Layer List will appear on top of all other sources in the preview. This list also controls visibility of each of the elements in the shot.

Source Layers

The bottom left part of the Shot Editor window lists the sources that make up your shot.

Figure 18. Shot Sources
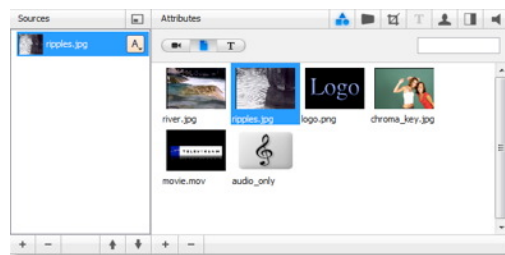
Click on the Logo icon (source) in the Configuration Area. Notice that the Logo is displayed in the Shot Preview area. Click the Ripples icon (source) and the Preview switches to Ripples. This is how you change the source media for this layer in the shot.
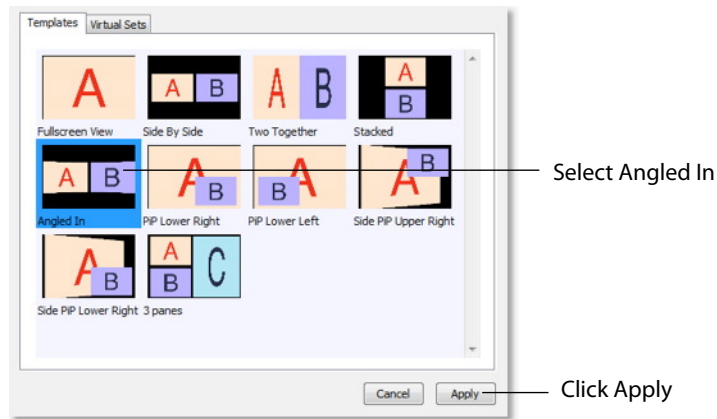
Template Window

The Template window icon is located in the controls bar in the middle of the window.

Figure 19. Template window Icon

Click on the template window icon to open the Template window. Select the Angled In template and click the Apply button:
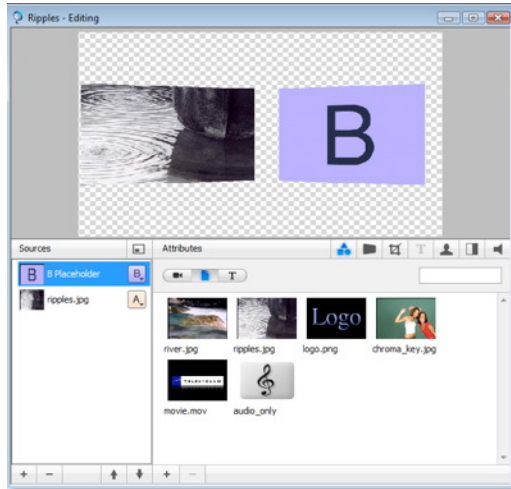
Figure 20. Template window

Notice the Preview has changed again in the Shot Editor window, and now shows the Ripples image on the Left side. This is because the template selected has an A and a B

portion to it. Two different sources can be assigned to A and B, but for now only A is assigned (with the Ripples source):

Figure 21. Shot Using Template

Sources in Wirecast can be assigned either A, B or C in the Source Layers list. To change the assignment, click the A (or B or C) icon and make a selection. This makes choosing a new template much simpler because Wirecast automatically positions the correct sources on screen.

For example, to change the media for the source that is identified as B, select the source identified as B, then click the River icon in the Configuration area. Your Preview should now look like this:
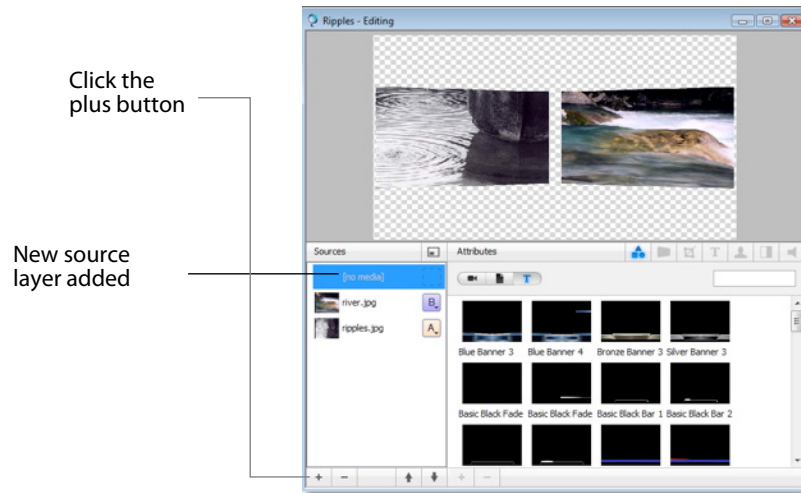
Figure 22. Preview with New Media Source

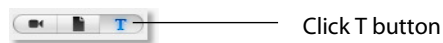Click on the B source

Click on the River icon
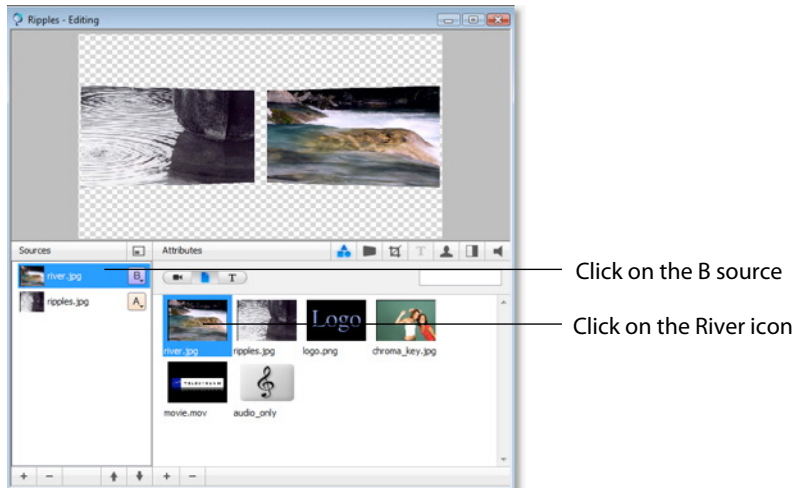
Titles

You can also add a title to a shot. First click the plus (+) button on the bottom of the Source list to add a new layer:

Figure 23. New Layer Added

Click the
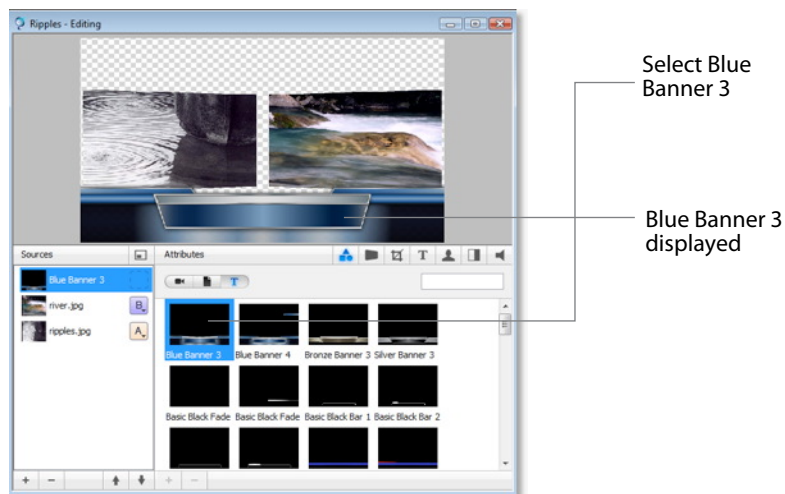plus button

New source
layer added

To add a title template, click the T button on the control panel:

Figure 24. Title Template Icon

Click T button

Select the title template called Blue Banner 3 (items are not listed alphabetically) and your preview will add the title:

Figure 25. Blue Banner 3 Selection

Select Blue
Banner 3

Blue Banner 3
displayed

Next, click the T icon in the Attributes bar to enable text editing:

Figure 26. Edit Text window
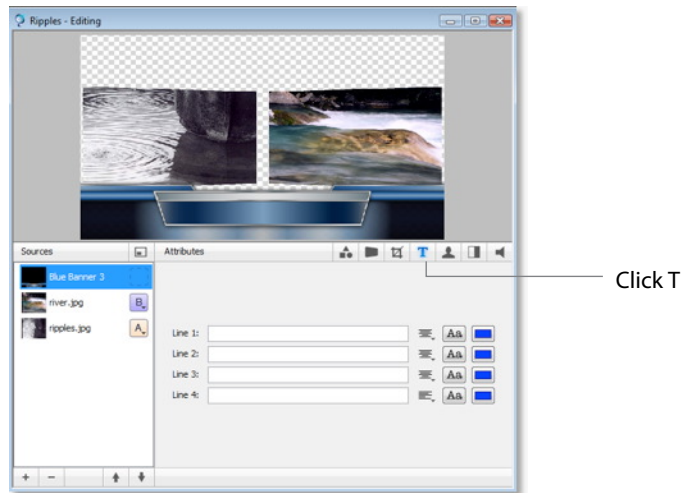
Click T

Type text into lines 1 & 2 and it will display in the preview window:
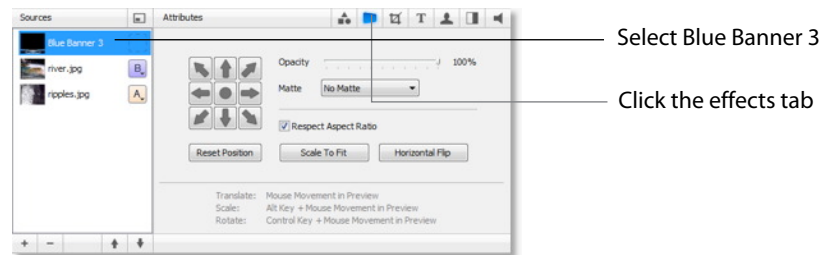
Figure 27. Added Text

Two lines of text

Effects/Motion

Positioning Objects

The sources in a shot can be positioned anywhere on the on screen. Make sure Blue Banner 3 is selected. Click the Effects tab in the Shot Editor.

Figure 28. Effects window Display

Select Blue Banner 3

Click the effects tab

Though the title element is initially placed in the bottom middle of the Preview screen, it can be moved anywhere. To move the title, click and drag it to a new location. You can also move the title to an edge, corner, or center by clicking on one of the repositioning buttons in the configuration area:

Figure 29. Repositioning Controls

Click a button to move an element
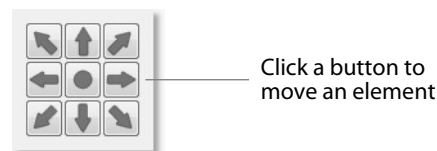
You can also resize or rotate the title.

To resize the title (while respecting aspect ratio), hold the Alt key down while moving the mouse vertically. To resize (independent of the aspect ratio), hold the Alt key and the shift key down while moving the mouse vertically and horizontally. The Respect Aspect Ratio checkbox in the configuration area must be unchecked.
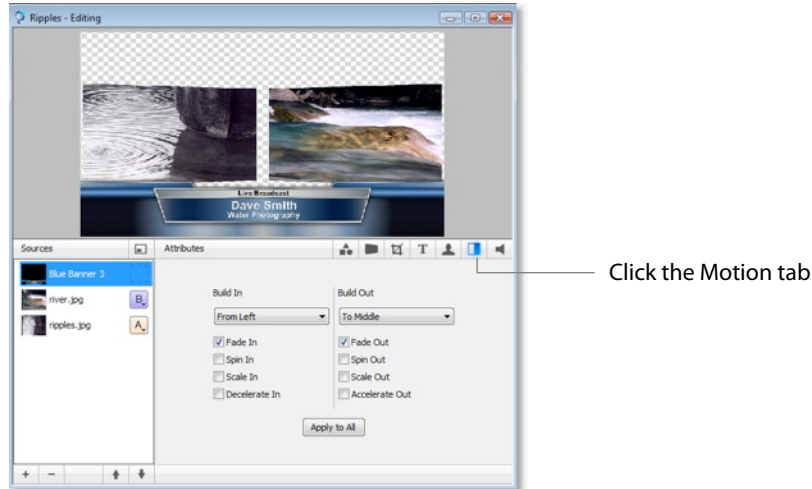
To rotate the title, hold down the Ctrlkey while moving the mouse vertically and horizontally.

Motion for Objects

All objects (including the title) can have motion assigned to them. Click the Motion tab, to open the Build-In/Build-Out configuration panel:

Figure 30. Motion window

Click the Motion tab

Motion will only occur during a transition (when you click Go, or click a shot in AutoLive mode). Motion defines how to add (Build-In) or remove (Build-Out) a shot element.

There are two forms of Motion:

1. Build-In (add) Build-In motion occurs when the shot is added to the Live Broadcast display.

2. Build-Out (remove) Build Out motion occurs when the shot is removed from the Live Broadcast display.

Changing Motion Options

Click the menu under Build-In in the configuration area and select From Left. Also check the Decelerate In checkbox:

Figure 31. Motion Control Selections

Click and select From Left

Check Decelerate In
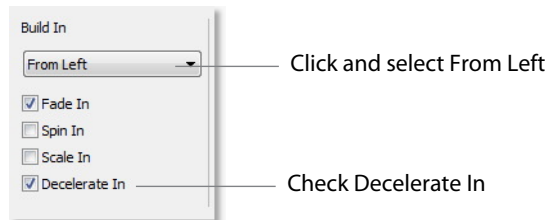
To see this behavior in action, you must go back to the Main window and trigger the Build-In action,. To do this, follow these steps:

1. Close the Shot Editor window by clicking the X in the upper-right corner of the window.

2. In the Main window, make sure Smooth transition is selected.

3. Click on the Blank Shot, then click the Ripples shot (recently edited).

Notice that when the Title appears it comes in from the left.

Tutorial 3: Broadcasting

This tutorial demonstrates how to setup and broadcast your Wirecast presentations. You can broadcast to a specific computer (Unicast), multiple viewers (Multicast), or even record your broadcast to disk.

There are two main components for broadcasting your presentation (or saving it to disk):

1. Encoding You need to decide how you are going to encode the broadcast. Encoding is the type of compression you will use (JPEG, MPEG4, etc.). Wirecast comes configured with many common encoding options.

2. Destination A destination for the broadcast must be selected. You can send it to a server for broadcast or save it to disk.

Broadcast Settings

To display the Broadcast Settings window, select Broadcast Settings from the Broadcast menu (or press the Ctrl+Y keys).

Multiple settings for the same broadcast can be listed in the top part of the Broadcast Settings window. For example, you might want to create a broadcast with multiple bit-rates for viewers using different internet connections. You may also want to record to disk while broadcasting your presentation. To add a new broadcast setting to the list, click the plus (+) button.

Use the Encoder Preset menu to select how your broadcast will be encoded (which CODEC to use). For the purpose of this tutorial, select any of the encoders, or just use the default setting.

Configuration options depend on the encoder selected. Only two streaming types are available: QuickTime and Windows Media.

Use the Destination menu to select the destination of your broadcast. Most of these are remote server locations, but the last option enables you to save your broadcast on your local disk.

Figure 32. Broadcast Settings window

Broadcast settings list

Click to add a new setting

Select encoder

Select destination
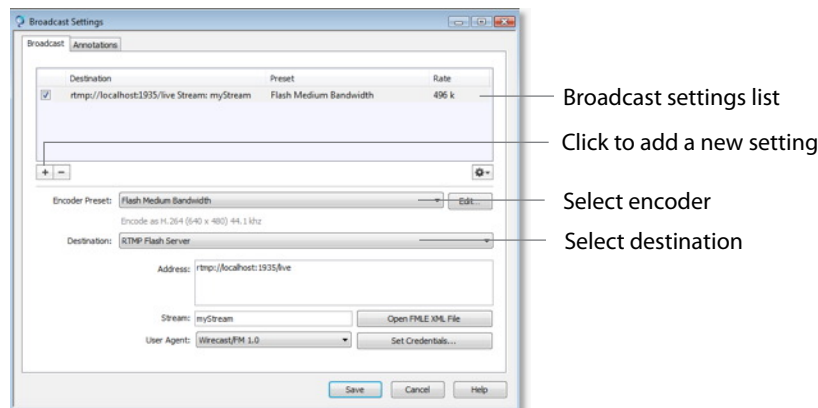
Note: Clicking in the list area on a location that de-selects all the settings creates a no output state. This is corrected by clicking any setting on the list.

QuickTime Streaming

From the Encoder Preset menu, select DSL/Cable-MPEG4. This is one of several QuickTime encoders provided.

Figure 33. QuickTime Streaming Setup window

Select DSL/Cable-MPEG4
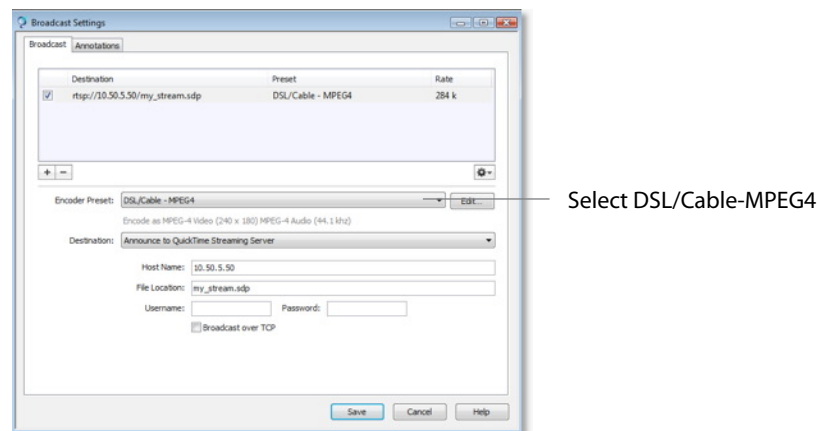
Wirecast provides five destinations for QuickTime streaming:

1. Announce to QuickTime Streaming Server This will talk to a QuickTime Streaming Server and use the server to send the broadcast to users who view that server. (This is the default destination.)

2. Built-in Streaming Server Wirecast includes a built-in streaming server which will allow a small number of viewers to view your broadcast. Define the name of the SDP file and you can immediately broadcast.

3. Unicast This will broadcast directly to one single client (computer). You must define the address for the single client, then the presentation is streamed directly to that computer.

4. Multicast This is an advanced feature that will broadcast globally on a network. In a LAN environment, this option can provide the ability to broadcast to multiple users without using QuickTime Streaming Server. This feature only works over a LAN, not over the Internet.

5. Record to Disk If you want to save your broadcast, you can use this option to record the broadcast stream to disk.

Announce to QuickTime Streaming Server

Since this is the most common method for QuickTime, you should always consider using this option for your broadcast. To use this feature, you must supply a host name

and file location. You need to supply a user-name and password only if your server requires a login.

This feature requires that you have access to a QuickTime Streaming Server (QTSS) or Darwin Streaming Server (DSS). Darwin Streaming Server is a free download from Apple and can be installed on many operating systems (not just Macintosh).

Unicast

Unicast is used to broadcast to only one computer. To set up a unicast, follow these steps:

1. Obtain the IP address of the target computer, and configure your broadcast using it.

2. Save an SDP file on the target computer.

3. Start broadcasting your presentation.

4. The viewer must open the SDP file using QuickTime Player to see your presentation.

Note: If you change any setting regarding the broadcast (encoding settings, etc), you must re-create and re-distribute the SDP file.

Multicast

Multicast is used to broadcast to any computer on your local network (not the internet). To use this feature, you must create and distribute an SDP file to all users on your local network who wish to view the stream.

The Video Address and Audio Address (and related ports) are, effectively, fake addresses that do not really exist on the local network. This information is stored in the SDP file so that client applications know where to look for the stream. The default addresses/ports that Wirecast generates are generally sufficient to use.

To set up a multicast, follow the same step given for Unicasting. (See Unicast, immediately preceding.)

Record To Disk

If you wish to archive your stream, you can use the Record To Disk destination. The only setup information required is the filename. If you use Auto Increment Filenames then all files will be saved with a sequential number appended to them.

Windows Media Streaming

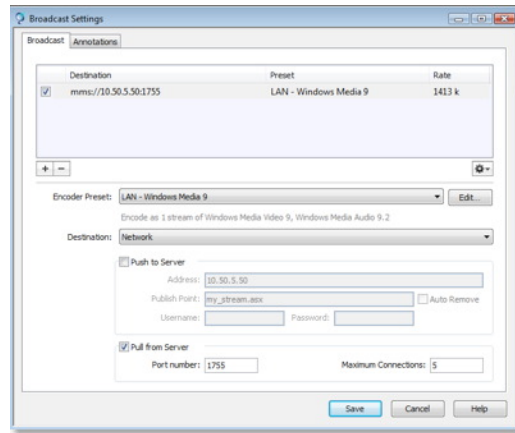Select LAN-Windows Media 9 from the Encoder Preset menu.

Note: Windows Media options are only available when running on a Windows computer.

Figure 34. Windows Media Streaming Display

There are two destinations available for Windows Media:

1. Network The stream will be broadcast over the network, using either a server or your local computer.

2. Record to Disk If you want to save your broadcast you can use this option to record the stream to disk.

Network-Push To Server

To use the Network-Push To Server option, you must have access to a local Windows Media Server, or one located at an ISP (search the internet for Streaming Windows Media Server to find one). Using this option is a more professional way of creating a stream because it places the bandwidth strain on the remote server. All you need is a good local connection to the internet to push your presentation onto the Windows Media Server.

To configure this setting, enter the Internet address of the remote server, the file name that will become part of the URL that your users use to start the presentation, and any user name/password required by the ISP. If you check Auto Remove the file is deleted from the server when your presentation is finished.

Network-Pull from Server

The Network-Pull from Server option turns your local computer into a mini Windows Media Server. This enables you to broadcast immediately from your computer, rather than through an ISP. There are, however, some limitations:

1. User Requirement You cannot have more than 50 users connected at any one time.

2. Bandwidth Requirement You must have enough bandwidth on your computer to supply all of your viewers.

3. CPU Requirement Since your computer is acting as a server, the CPU must be fast enough to handle all of the user connections.

The largest issue is with using this method is bandwidth. If, for example, all of your viewers are on a local network (a business or school), then you should be able to use

this method. However, if you have a DSL connection to the internet and you want to broadcast a 200k stream to 20 viewers, you will probably not have enough upload bandwidth to accommodate this.

Note: Be aware that when you use Wirecast with an internet connection, the limiting factor is your upload bandwidth. Most ISP businesses offer packages that have a higher download than upload bandwidth. For example, a 512k DSL package is often limited to 256k of upload bandwidth.

To use the Network-Pull from Server option, set the port number that your users will use to connect to your computer. They will connect by using the Open URL option in Windows Media Player and enter a URL. For example, mms://192.168.1.67:8080 represents a computer IP address of 192.168.1.67 and a port number of 8080.

Note: The URL "mms://" does not work with the Macintosh version of Windows Media Player, and you must use "http://" instead.

Flash Streaming

Select Flash Medium Bandwidth from the Encoder Preset menu. Wirecast can stream to several Flash streaming servers, including Flash Media Server (Adobe) and Wowza Streaming Server (Wowza).

When you configure Wirecast to stream using Flash, Wirecast displays a Flash queue bar in the main window. The Flash queue shows you how much data is currently buffered on your computer, waiting to be transferred to the server.

Figure 35. Flash Streaming Setup window
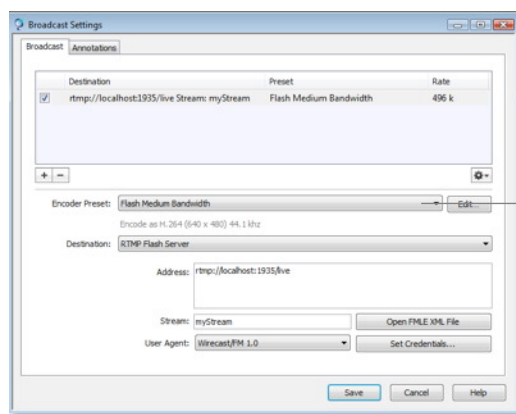
Select Flash Medium Bandwidth

Encoder Preset

Encoder Preset enables you to select an encoder used for broadcast. If you change the preset to another encoder type, the list of destinations associated with it will also change. The destinations are tied to the type of codec you are using.

Destination

The Destination menu lists many CDN's and live streaming Websites. You need to have an account with the selected destination to use that service. You can also select Record to Disk as a destination for your presentation. The RTMP Flash Server is the default destination.

Address

The address of the selected destination is obtained from your Flash Media Server administrator for this URL.

Stream

Each Flash stream requires that you enter the name of the stream. Contact your Flash Media Server administrator to obtain this name.

Open FMLE XML File

Wirecast can load configuration files that have been created for Flash Media Live Encoder (FMLE). Wirecast will read the RTMP Address and Stream Name from this file, but it will not read any other configuration information from the FMLE XML file (bit rates, codec configuration, etc.). Many popular sites provide an FMLE configuration file for your stream configuration.

User Agent

Although rare, some streaming services require that Wirecast presents itself as FMLE when broadcasting. By default, Wirecast correctly presents itself as Wirecast/FM 1.0. Do not change this unless your provider has asked you to do so.

Set Credentials

Some Flash Media Servers require authentication. Wirecast offers the standard Adobe authentication method. However, if required to do so by your server, you must enter your credentials here. But if your server does not require authentication, there is no need to provide these credentials.