



Post Producer[®]
Cookbook

ComponentPac
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Visual Effects

The purpose of this cookbook is to illustrate practical ways to approach and implement many aspects of compositions. This chapter provides examples of workflows that are typically used in Post Producer visual effects applications.

- [Fade to Black](#)
- [Basic Image Overlays](#)
- [Animating Image Overlays](#)
- [Image Scaling and Placement](#)
- [Applying Overlays at Various Times](#)
- [Creating a Looping Overlay](#)
- [Creating a Squeezeback](#)

Note: All of the examples in this guide are complete compositions. To test them, you can copy and paste the example into a text editor. Change the references to the media files you are supplying, and save the file as XML. Then, submit it to a suitable Post Producer workflow.

A library of composition examples and media generated by the composition are provided to illustrate various features of Post Producer. To access these examples, go to the www.telestream.net Web site and log in as an authorized user.

Click on the Post Producer link and select the CML examples tab to view each CML example, which includes the CML file, the exported workflow it can be processed with, source media, and a sample proxy video clip that was produced from it.

Fade to Black

This example shows you how to fade a video clip to black.

In this example, which has one Segment, a Canvas is applied at layer 1, with the color black as background. The Video is applied at layer 2. The Head and Tail are set at 0 and 10 seconds, respectively: the Fade is set to 2 second each, with Opacity at 0 percent.

Thus, from 0 to 2 the movie fades up from the black background, and at 8 seconds, the movie fades down to black at 10 seconds; the end of the movie.

Composition

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
<!--Fade to Black DUR=1 min 16x9 1920x1080i DolbyE 5.1+2 -->
<!-- All PNG files: 600 x 420 -->
<!-- Output: 1080i x264 -->
  <Source identifier="1">
    <File location="\share\path\fade_to_black.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Canvas align="head" adjust="body" duration="00:00:10.00"
background="black" layer="1" />
      <Video source="1" layer="2" >
        <Head>
          <Opacity level="0%" />
          <Fade duration="00:00:02.00" />
          <Edit time="00:00:00.00"/>
        </Head>
        <Body>
          <Opacity level="100%" />
        </Body>
        <Tail>
          <Opacity level="0%" />
          <Fade duration="00:00:02.00" />
          <Edit time="00:00:10.00"/>
        </Tail>
      </Video>
    </Segment>
  </Sequence>
</Composition>
```

Basic Image Overlays

This example—from the Alpha Channel Image composition—illustrates a typical method of overlaying an image on a video.



Composition

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <!-- Demo overlay video with an image with alpha channel -->
  <!-- Source Video: 1920 x 1080 @25 fps -->
  <!-- Image: 720 x 405 PNG (16 x 9) with alpha channel -->
  <!-- Output: 1920 x 1080 @25 fps plus proxy -->
  <Source identifier="1">
    <File location="\\share\path\Queensboro_Bridge_NY_Cab.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Video align="head" adjust="edge" fill="none" source="1"
layer="0"/>
      <Image align="head" adjust="body" fill="loop" layer="1"
location="\\share\path\alpha_channel.png" frames="1"
layout="stretch" />
    </Segment>
  </Sequence>
</Composition>
```

Key things to note in this example:

- The video and image are in the same segment (and start playing at the same time). Because the image has no duration (after all, it's an image), use the fill and adjust attributes to play the image for the duration of the segment.
- The image is on layer 1, so that it displays on top of the video (at layer 0).
- Layout is specified as *stretch*, which makes the image the same size as the output frame. In this case, because the image is also 16 x 9, no distortion takes place. However, had it been any other aspect ratio, it would have been distorted. You can specify Layout as *zoom* or *fill* to maintain the correct aspect ratio.

Animating Image Overlays

This example—from the Alpha Channel Image Animation composition—illustrates how to animate an image overlaid on a video file.

Composition

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <!-- Purpose: Demonstrate animating overlay image with alpha
  channel -->
  <!-- Source Video: 1920 x 1080 @25 fps -->
  <!-- Image: 720 x 405 PNG (16 x 9) with alpha channel -->
  <!-- Output: 1920 x 1080 @25 fps plus MOV proxy -->
  <Source identifier="1">
    <File location="\\share\path\Queensboro_Bridge_NY_Cab.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Image align="head" adjust="body" fill="loop" layer="1"
      layout="zoom" frames="1" location="\\share\path\Alpha_channel.png"/>
      <Video align="head" adjust="edge" fill="none" source="1"
      layer="0">
        <Tail>
          <Edit time="00:00:02.000" />
        </Tail>
      </Video>
    </Segment>
    <Segment>
      <Image align="head" adjust="body" fill="loop" layer="1"
      layout="zoom" frames="1" location="\\share\path\Alpha_channel.png">
        <Head>
          <Fade duration="00:00:02.000"/>
          <Opacity level="100%" />
          <Scaling x="100%" y="100%" />
        </Head>
        <Body>
          <Scaling x="20%" y="100%" />
        </Body>
        <Tail>
          <Fade duration="00:00:02.000"/>
          <Opacity level="100%" />
          <Scaling x="100%" y="100%" />
        </Tail>
      </Image>
      <Video align="head" adjust="edge" fill="none" source="1"
      layer="0">
        <Head>
          <Edit time="00:00:02.000" />
        </Head>
      </Video>
    </Segment>
  </Sequence>
</Composition>
```

Key things to note in this example:

- There are two segments, so that each can be configured independently to achieve animation more easily.
- In the first segment the image is configured to display statically, just as it is in the [Basic Image Overlays](#) example above.
- The second example implement X-axis animation by implementing effects in the Head, Body, and Tail:
- In the Head:
 - Duration 2 seconds, with scaling at 100%—just as in the first segment.
 - Scaling at 100% is, in effect, no scaling—so this element could be deleted with no change.
 - The Opacity is set to 100% as well—but the default value of opacity in Head and Tail is zero, so you must set it if you don't want an invisible image or a fade-in effect.
- In the Body:
 - Scaling is 20% on the X axis, shrinking it to the left because the image is aligned on the head.
 - No duration is ever specified in a Body. The Image is set to adjust on body, and, given that this clip is about 8.92 seconds long, the body duration is 8.92 - 4 seconds long (2 for Head, 2 for Tail).
- In the Tail:
 - The fade again is 2 seconds, opacity is set to 100% for the same reason noted in Head, and scaling is set back to 100%, bringing the image back to its original shape and size.

Image Scaling and Placement

This example scales and places an image in the lower right-hand portion of the frame, and aligns it in time with an underlying video sequence.

Notice that the Sequence nests another Sequence. This is one way to isolate Segments, so a segment with an Image can overlay two segments with video.

Setting align="both" results in the overlay staying on for the duration of the overlay segment, with the offset applied equally to both the head and the tail of the overlay.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="\\share\path\Mystic River Seg 1.mov" />
  </Source>
  <Source identifier="2">
    <File location="\\share\path\vod\FTD_Start_at_16.21.mov" />
    <Mask left="12.5%" right="87.5%" top="0%" bottom="100%" />
  </Source>
  <Sequence>
    <Segment>
      <Image align="both" adjust="body" fill="loop" layer="1"
location="\\share\path\Vantage-logo_small.png" frames="1"
layout="none" offset="00:00:02.000">
        <Head>
          <Scaling x="30%" y="30%" />
          <Translation x="80%" y="70%" />
          <Opacity level="0%" />
          <Fade duration="00:00:01.000" />
        </Head>
        <Body>
          <Scaling x="30%" y="30%" />
          <Translation x="80%" y="70%" />
          <Opacity level="100%" />
        </Body>
        <Tail>
          <Fade duration="00:00:01.000" />
          <Scaling x="30%" y="30%" />
          <Translation x="80%" y="70%" />
          <Opacity level="0%" />
        </Tail>
      </Image>
    </Segment>
    <Sequence>
      <Segment>
        <Video source="1" >
          <Tail>
            <Edit time="00:00:8.933" />
          </Tail>
        </Video>
      </Segment>
      <Segment>
        <Video source="2" >
          <Tail>
            <Edit time="00:00:10.330" />
          </Tail>
        </Video>
      </Segment>
    </Sequence>
  </Sequence>
</Composition>
```



```
        </Video>  
      </Segment>  
    </Sequence>  
  </Segment>  
</Sequence>  
</Composition>
```

Applying Overlays at Various Times

Here are some methods you can use to apply an overlay—an advisory, for example—at various points in your media, regardless of its duration. The Image element is used similarly to an Advisory overlay. Unlike an Advisory, Image elements require a location for the path to the image file.

Example

For context, this example applies an advisory to the source video file.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="//Share\Mystic River.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Video source="1" layer="0">
        <Tail>
          <Edit time="00:00:05.000" />
        </Tail>
      </Video>
      <Advisory offset="00:00:01.000" align="both" fill="loop"
adjust="body" layer="1" type="USTV" rating="TV-MA" >
        <Head>
          <Translation x="5%" y="5%" />
          <Opacity level="0%"/>
          <Fade duration="00:00:00.500" />
        </Head>
        <Body>
          <Opacity level="100%" />
          <Translation x="5%" y="5%" />
        </Body>
        <Tail>
          <Translation x="5%" y="5%" />
          <Opacity level="0%"/>
          <Fade duration="00:00:00.500"/>
        </Tail>
      </Advisory>
    </Segment>
  </Sequence>
</Composition>
```

Options

Here are several options for advisory placement, by changing the use of and the values of the Advisory attributes to achieve different results.

Setting a Duration

This Advisory sets the duration to 3 seconds. By default, the alignment is at the head—thus, it starts at the beginning of the segment.

```
<Advisory duration="00:00:03.000" layer="1" type="USTV"
rating="TV-MA">
```

Displaying the Advisory at the End of the Media

This Advisory also sets the duration to 3 seconds, but by adding the align attribute, the overlay starts 3 seconds before the end of the segment in which the Advisory is placed.

```
<Advisory align="tail" duration="00:00:03.000" layer="1"
type="USTV" rating="TV-MA">
```

Displaying the Advisory for the Entire Segment

In this Advisory, the duration is arbitrary—the overlay will continue for the length of the segment. In this case, you explicitly set the adjust parameter to accommodate the fade up and down for the advisory layer image, which is one frame long (and therefore, shorter than the specified fade.)

Note: Since this is a single frame overlay, fill="hold" would produce the same result.

```
<Advisory fill="loop" adjust="body" layer="1" type="USTV"
rating="TV-MA">
```

Ending the Overlay at a Specific Time

This Advisory causes the overlay to start and continue to last second of the segment. You apply a 1 second offset to the tail—thus ending the overlay one second before the end of the segment.

```
<Advisory offset="00:00:01.000" align="tail" fill="loop"
adjust="body" layer="1" type="USTV" rating="TV-MA" >
```

Trimming Both Ends of the Advisory

Here's how to start the overlay at a certain time and end it at a certain time in a segment. With a 1-second offset applied to both the head and the tail, it starts 1 second after the segment starts and ends 1 second before the end of the segment.

```
<Advisory offset="00:00:01.000" align="both" fill="loop"
adjust="body" layer="1" type="USTV" rating="TV-MA" >
```

Notes

When using an Advisory overlay or single frame overlay (frames="1" for an image in a video segment,) you must specify either a fill type, a duration, or (for an explicitly referenced overlay) you can specify a length in terms of number of frames.

For example, frames="90" is the same as duration="00:00:03.003" at 29.97 fps.

The application of align="both" is intended for centering an overlay on a segment of arbitrary length.

Creating a Looping Overlay

This overlay application involves using the Video element *fill-duration* attribute to implement a looping overlay of arbitrary duration.

When creating a template for an overlay composition, a looping overlay for branding may be desired, but setting an arbitrary duration for the overlay can be problematic when there are multiple segments in the program.

This example uses the *fill-duration* attribute to cause a short looping bug to loop for a duration set at run time, over a multi-segment composition. All of the variables can be set in a workorder or the CONTENT variable can be a single submission with TOTALDURATION defined as a Timecode variable by an Analysis action, and the LOOPDURATION computed from the TOTALDURATION.

Note: For an example of using variables in Post Producer, see [Using Variables in Conform Workflows](#).

Example

For context, this example applies an advisory to the source video file.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="{ $#CONTENT}" />
  </Source>
  <Source identifier="2">
    <File location="D:\assets\bumper.mov" />
  </Source>
  <Source identifier="3">
    <File location="D:\assets\trailer.mov" />
  </Source>
  <Source identifier="4">
    <File location="d:\assets\looping_bug.mov" />
  </Source>
  <Sequence>
    <!-- This Sequence has the bumper and trailer, with the main
    content and duration defined at runtime -->
    <Segment>
      <Video source="2" layer="1" />
    </Segment>
    <Segment>
      <Video source="1" layer="1">
        <Tail>
          <Edit mode="duration" time="{ $$TOTALDURATION}" />
        </Tail>
      </Video>
    </Segment>
    <Segment>
      <Video source="3" layer="1" />
    </Segment>
  </Sequence>
```

```
<Sequence>  
  <!-- This Sequence has the looping bug overlay, with duration  
  defined at runtime -->  
  <Segment>  
    <Video source="4" layer="2" fill="loop" fill-  
duration="{ $$LOOPDURATION}" />  
  </Segment>  
</Sequence>  
</Composition>
```

Creating a Squeezeback

Here's how to create a squeezeback from two videos—where one video appears to push the other out of the frame.

Example

In this example, the segment plays video clips 1 and 2 (of the same duration) concurrently in different layers, with one layer appearing to squeeze away the other.

This is accomplished by animating the Scaling and Translation of the layers, using Fades in the Head and the Tail. Because the Opacity in the Head and Tail elements are set to 100%, the fade determines the length of time it takes for the Scaling and Translation values to change from the beginning value in the Head to the halfway point in the Body, and then from the intermediate values in the Body to the final values in the end of the Segment, defined by the duration of the fade in the Tail.

The Scaling and Translation values mirror each other for the effect... note that the default value of x and y for Translation is 100%, and that is the value used anywhere it is not explicitly defined.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition version="1.0" xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="\\share\source\Source_video_1.mov" />
  </Source>
  <Source identifier="2">
    <File location="\\share\source\Source_video_2.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Video adjust="edge" align="head" layer="1" source="1" >
        <Head>
          <Fade duration="00:00:01.00" />
          <Opacity level="100%" />
          <Scaling x="100%" y="100%" />
        </Head>
        <Body>
          <Scaling x="50%" y="100%" />
        </Body>
        <Tail>
          <Fade duration="00:00:01.00" />
          <Opacity level="100%" />
          <Scaling x="0%" y="100%" />
        </Tail>
      </Video>
      <Video adjust="edge" align="head" layer="2" source="2">
        <Head>
          <Fade duration="00:00:01.00" />
          <Opacity level="100%" />
          <Scaling x="0%" y="100%" />
          <Translation x="100%" y="0%" />
        </Head>
        <Body>
```

```
<Opacity level="100%" />  
<Scaling x="50%" y="100%" />  
<Translation x="50%" y="0%" />  
</Body>  
<Tail>  
  <Fade duration="00:00:01.00" />  
  <Opacity level="100%" />  
  <Scaling x="100%" y="100%" />  
</Tail>  
</Video>  
</Segment>  
</Sequence>  
</Composition>
```


Audio Processing

This chapter provides examples of compositions and workflows that are typically used for audio processing in Post Producer applications.

- [Mixing Audio Tracks to Create a Mixed Stereo Pair](#)
- [Routing Audio Without Decoding](#)
- [Creating a Master File with Multiple Audio Tracks](#)
- [Downmixing Dolby E Encoded Audio](#)
- [Setting Up Audio Tracks in Premiere / FCP for Multi-track Audio Mapping](#)
- [Creating a Dolby Pro Logic Mix from Discrete 5.1 Audio](#)
- [Upmixing 2-channel Dolby Pro Logic Source to Discrete Channels for 5.1 Surround Encoding](#)

Note: All of the examples in this guide are complete compositions. To test them, you can copy and paste the example into a text editor. Change the references to the media files you are supplying, and save the file as XML. Then, submit it to a suitable Post Producer workflow.

A library of composition examples and media generated by the composition are provided to illustrate various features of Post Producer. To access these examples, go to the www.telestream.net Web site and log in as an authorized user.

Click on the Post Producer link and select the CML examples tab to view each CML example, which includes the CML file, the exported workflow it can be processed with, source media, and a sample proxy video clip that was produced from it.

Mixing Audio Tracks to Create a Mixed Stereo Pair

Post Producer enables you to perform audio mixing—mapping source to output channels—directly in a *Source*, as you identify your input media files. You use the *Mix* element to map audio (*source* attribute) tracks from the associated input file to the *target* tracks in the output. During mixing, Vantage decodes and re-encodes the audio.

You can approach mixing in two different ways: adding a *Mix* for every input or output channel, or by combining common channels, using the *source* and *target* attributes.

Creating the Mixed Stereo Pair

Both of these snippets combine a stereo pair with a mono track to make a mixed stereo pair. Here are two samples that perform the same task:

```
...
<Source identifier="2"> <!-- English -->
  <File location="\share\path\Master Oh_Susanna.mov"/>
  <Mix source="1 2" target="1 2"/>
  <Mix source="3" target="1" level=".707"/>
  <Mix source="3" target="2" level=".707"/>
</Source>
```

OR

```
...
<Source identifier="2"> <!-- English -->
  <File location="\share\path\Master Oh_Susanna.mov"/>
  <Mix source="1 2" target="1 2" level=".707"/>
  <Mix source="3" target="1 2" level=".707"/>
</Source>
```

The first *Mix* maps channels 1 and 2 respectively into the same channels in the output.

In the first example, source 3 is mixed to targets 1 and 2 using two *Mix* elements. In the second example, the mix is performed with a single *Mix*, by specifying targets 1 and 2 in combination.

The level of audio from source channel 3 mixed into channels 1 and 2 is dropped by 3 db (0.707) to compensate for acoustic doubling.

Routing Audio Without Decoding

Routing (performed using Route) allows you to move audio from tracks in the source to other tracks in the output, without decoding the audio. It simply passes it through. You can not mix audio channels, or change audio levels using the Route element.

Mixing 2 or more channels together or adjusting audio levels requires audio decoding—use the Mix instead of the Route element, which decodes audio first.

Here are some tips for using Route effectively:

- When routing tracks other than 1 or 2, tracks 1 and 2 must explicitly be mixed at a level of 0 (`<Mix source="1 2" target="1 2" level="0"/>`) in addition to your intended Route commands.
- If audio is fully conformed in Avid Pro Tools and it should be left untouched, you can use Route to map audio from the input file into other tracks of the output file without decoding it.

Passing Dolby E to Output

A common use of the Route element is to pass compressed Dolby E stereo to the output without decoding it, as shown in this example.

```
...  
<Source identifier="2"> <!-- English -->  
  <File location="\\share\path\Master_DolbyE_Stereo.mov"/>  
  <Route source="1 2" target="1 2"/>  
</Source>  
...
```

Creating a Master File with Multiple Audio Tracks

Here is a composition that generates a media file of mp4 video, with several audio tracks in various languages.

Note that the level of audio level of source channels 3, 4, and 5 is dropped by 3 db (0.707) to compensate for acoustic doubling.

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Composition version="1.0"
xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="//share/path/Master.mov"/>
    <Mix source="1 2" target="1 2" level="0%"/>
  </Source>
  <Source identifier="2">
    <!-- English -->
    <File location="//share/path/Master.mov"/>
    <Mix source="1 2" target="1 2"/>
    <Mix source="3" target="1" level=".707"/>
    <Mix source="3" target="2" level=".707"/>
  </Source>
  <Source identifier="3">
    <!-- French -->
    <File location="//share/path/Master.mov" />
    <Mix source="1 2" target="3 4"/>
    <Mix source="4" target="3" level=".707"/>
    <Mix source="4" target="4" level=".707"/>
  </Source>
  <Source identifier="4">
    <!-- Italian -->
    <File location="//share/path/Master.mov"/>
    <Mix source="1 2" target="5 6"/>
    <Mix source="5" target="5" level=".707"/>
    <Mix source="5" target="6" level=".707"/>
  </Source>
  <!-- stereo audio in video source and 5 VOs -->
  <!-- map source mono track to a track in the -->
  <!-- output file. Channel map must be set in the -->
  <!-- Compose action in the vantage workflow. -->
  <Sequence>
    <Segment>
      <Video source="1"/>
      <Audio align="head" source="2" />
      <Audio align="head" source="3" />
      <Audio align="head" source="4" />
      <Audio align="head" source="5" />
    </Segment>
  </Sequence>
</Composition>
```

Downmixing Dolby E Encoded Audio

You can use Post Producer to decode and remix Dolby E encoded audio programs in a variety of ways.

The Dolby E Mix elements map L and R to stereo L and R respectively, without changing the level. The center channel (3) is being split left and right, lowering by 3 dB (level="0.707107") to account for the increase in volume that happens when playing back from two speakers. The LFE effect channel in this example is dropped completely, since it shouldn't have any essential audio, except for rumble. Left Rear and Right Rear are also mapped to stereo L and R, and again dropped by 3 dB to avoid over-modulation from combining channels.

For a complete list of DolbyE programs and channel order, see *DolbyE Program and Channel Specifications* in the *Post Producer Developer's Guide*.

The Conform action decodes the Dolby E audio as specified in the CML, down-mixes the channels, and presents the conformed media with audio to the Transcoder.

Topics

- [Downmixing 5.1 to Stereo](#)
- [Downmixing 5.1+2 to Stereo](#)
- [Creating a Left/Right Downmix for Pro Logic Compatibility from Decoded Dolby E Audio](#)

Downmixing 5.1 to Stereo

This composition illustrates a method for downmixing Dolby Digital 5.1 Surround Sound to 2-channel stereo.

The Source element identifies a media file containing a Dolby E-encoded surround sound program, on channels 3 and 4. The DolbyE element is configured based on the decoding order for program 1011, sequence 5.1:

Track 1: 0L
Track 2: 0C
Track 3: 0Ls
Track 4: 0R
Track 5: 0LFE
Track 6: 0Rs.

Note: Note that the first Mix element mutes channel 1 and 2, because these PCM audio channels are not used.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition version="1.0"
xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1" timecode="ltc">
    <File location="\\share\Dolby_E\dolbye_audio.GXF" />
  <!-- Mute track 1 and 2 in prep for decoding -->
```

```

    <Mix source="1 2" target="1 2" level="0"/>
    <DolbyE channels="3 4" program="5.1">
    <!-- Mix Left (1) > Stereo Left (1) -->
        <Mix source="1" target="1" />
    <!-- Mix Right (4) > Stereo Right (2) -->
        <Mix source="4" target="2" />
    <!-- Mix Center (2) > Stereo Left & Right (2)at -3dB -->
        <Mix source="2" target="1 2" level="0.707107" />
    <!-- Mix Left Rear (3) > Stereo Left (1)at -3dB -->
        <Mix source="3" target="1" level="0.707107" />
    <!-- Mix Right Rear (6) > Stereo Right (2)at -3dB -->
        <Mix source="6" target="2" level="0.707107" />
    </DolbyE>
</Source>
<Sequence>
    <Segment>
        <Video source="1" />
    </Segment>
</Sequence>
</Composition>

```

Downmixing 5.1+2 to Stereo

This composition illustrates a method for downmixing Dolby Digital 5.1 + 2 Surround Sound to 2-channel stereo.

The Source element identifies a media file containing a Dolby E-encoded surround sound program, on channels 3 and 4. The DolbyE element is configured based on the decoding order for program 0, sequence 5.1 + 2:

Track 1: 0L
Track 2: 0C
Track 3: 0Ls
Track 4: 1L
Track 5: 0R
Track 6: 0LFE
Track 7: 0Rs
Track 8: 1R.

Note: Note that the first Mix element mutes channel 1 and 2, because these PCM audio channels are not used.

```

<?xml version="1.0" encoding="utf-8"?>
<Composition version="1.0"
xmlns="Telestream.Soa.Facility.Playlist">
    <Source identifier="1" timecode="ltc">
        <File location="\\share\Dolby_E\dolbye_audio.GXF" />
    <!-- Mute track 1 and 2 in prep for decoding -->
        <Mix source="1 2" target="1 2" level="0"/>
        <DolbyE channels="3 4" program="5.1+2">
    <!-- Mix Left (1) > Stereo Left (1) -->
        <Mix source="1" target="1" />
    <!-- Mix Right (5) > Stereo Right (2) -->

```

```

    <Mix source="5" target="2" />
<!-- Mix Center (2) > Stereo Left & Right (2)at -3dB -->
    <Mix source="2" target="1 2" level="0.707107" />
<!-- Mix Left Rear (3) > Stereo Left (1)at -3dB -->
    <Mix source="3" target="1" level="0.707107" />
<!-- Mix Right Rear (7) > Stereo Right (2)at -3dB -->
    <Mix source="7" target="2" level="0.707107" />
</DolbyE>
</Source>
<Sequence>
    <Segment>
        <Video source="1" />
    </Segment>
</Sequence>
</Composition>

```

Creating a Left/Right Downmix for Pro Logic Compatibility from Decoded Dolby E Audio

This example illustrates how you can decode and mix a Dolby E encoded 5.1+2 program into your output to make a left/right stereo pair for Pro Logic compatibility.

Note: Note that the first Mix element mutes channel 1 and 2, because these PCM audio channels are not used.

```

...
<Source identifier="1">
    <File location="\\share\path\DolbyE_5.1+2_audio_program.mov"/>
<!-- Configuration uses audio mapping from Dolby E encoded 5.1+2
program in source channels 1 and 2: source channels 1-7 are ordered
Left, Center, Left surround, (stereo program L is unused), Right,
LFE, Right surround -->
    <Mix source="1 2" target="1 2" level="0" phase="0°" />
    <DolbyE channels="1 2" program="5.1+2">
        <!-- Mix Left (1) > Stereo Left (1) -->
        <Mix source="1" target="1" phase="0°" />
        <!-- Mix Right (5) > Stereo Right (2) -->
        <Mix source="5" target="2" phase="0°" />
        <!-- Mix Center (2) > Stereo Left & Right (2)at -3dB -->
        <Mix source="2" target="1 2" level="0.707107" phase="0°" />
        <!-- Mix Left Surround (3) > Stereo Left (1) at -1.2 dB and
phase shift by 90 deg-->
        <Mix source="3" target="1" level="0.87178" phase="90°"/>
        <!-- Mix Left Surround (3) > Stereo Right (2) at -6.2 dB and
phase shift by 90 deg-->
        <Mix source="3" target="2" level="0.489898" phase="90°"/>
        <!-- Mix Right Surround (7) > Stereo Left (1) at -6.2 dB and
phase shift by -90 deg-->
        <Mix source="7" target="1" level="0.489898" phase="-90°"/>
        <!-- Mix Right Surround (7) > Stereo Right (2) at -1.2 dB and
phase shift by -90 deg-->
        <Mix source="7" target="2" level="0.87178" phase="-90°"/>
    </DolbyE>

```

</Source>

The DolbyE element identifies the program type and the channels it will decode from the input.

Now, you can mix the decoded channels:

- 0—5.1 program
- 1—Lt Rt program
- Track 1: 0L
- Track 2: 0C
- Track 3: 0Ls
- Track 4: 1L
- Track 5: 0R
- Track 6: 0LFE
- Track 7: 0Rs
- Track 8: 1R

into the output.

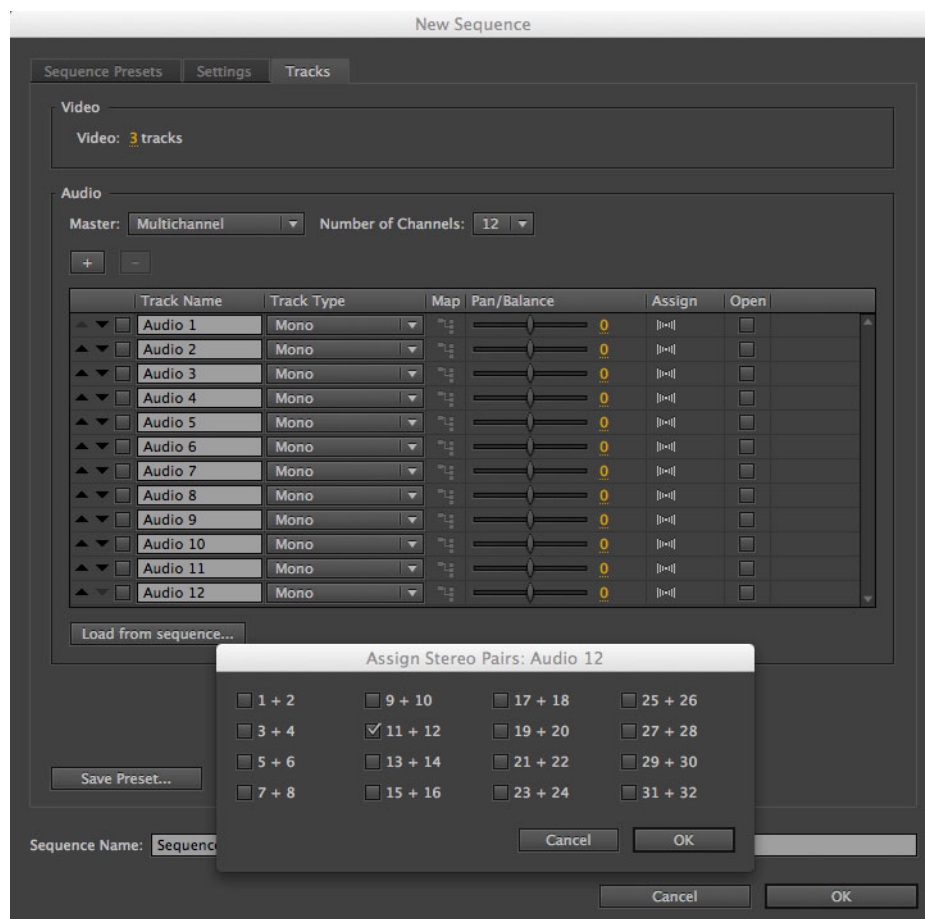
(where Ls and Rs from the source are phase-shifted 90° and -90° , respectively).

Setting Up Audio Tracks in Premiere / FCP for Multi-track Audio Mapping

Post Producer supports audio mapping from a Premiere or Final Cut sequence. When working with multiple audio tracks in the Premiere or Final Cut editors, audio mapping with the Final Cut 7 Pro Composer in the Compose action may be required to avoid unintentional mixing or summing of audio tracks when conforming XMEML, which can lead to audio levels in the output that are higher than intended, or distorting.

In Premiere, if you are working with more than 1 stereo track, the sequence must be set up as a Multichannel audio track, with as many Mono channels as needed to accommodate the audio.

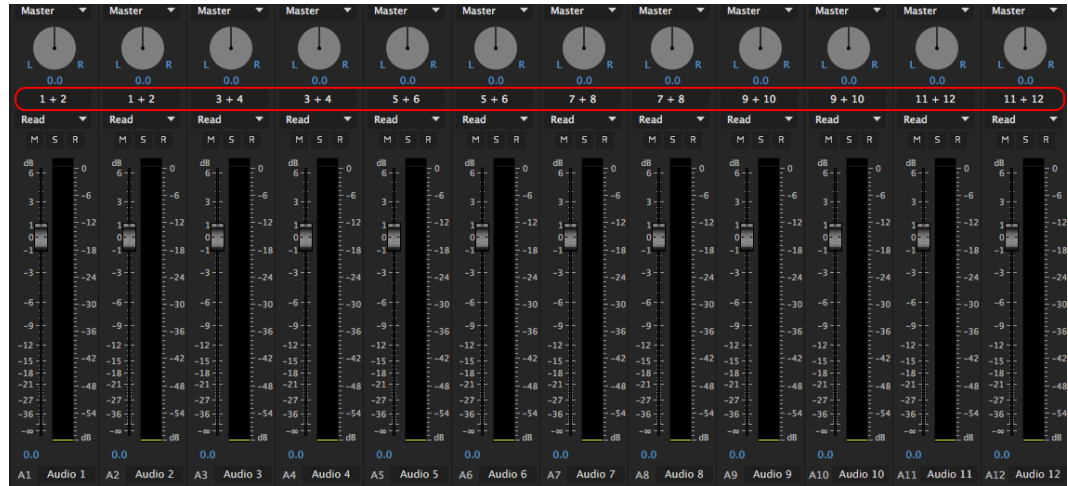
See the New Sequence > Tracks tab, below, where the Master set to Multichannel, with the number of channels as needed in multiples of 2—with Track Type set to Mono.



By default, the assignment of each channel is to tracks 1+2. If the audio is intended to be transcoded in Vantage as discrete channels, the assignments for audio channels greater than 1 and 2 need to be reassigned. Click the Assign button for each track and de-select the default assignment of 1 + 2, and change it to match the output.

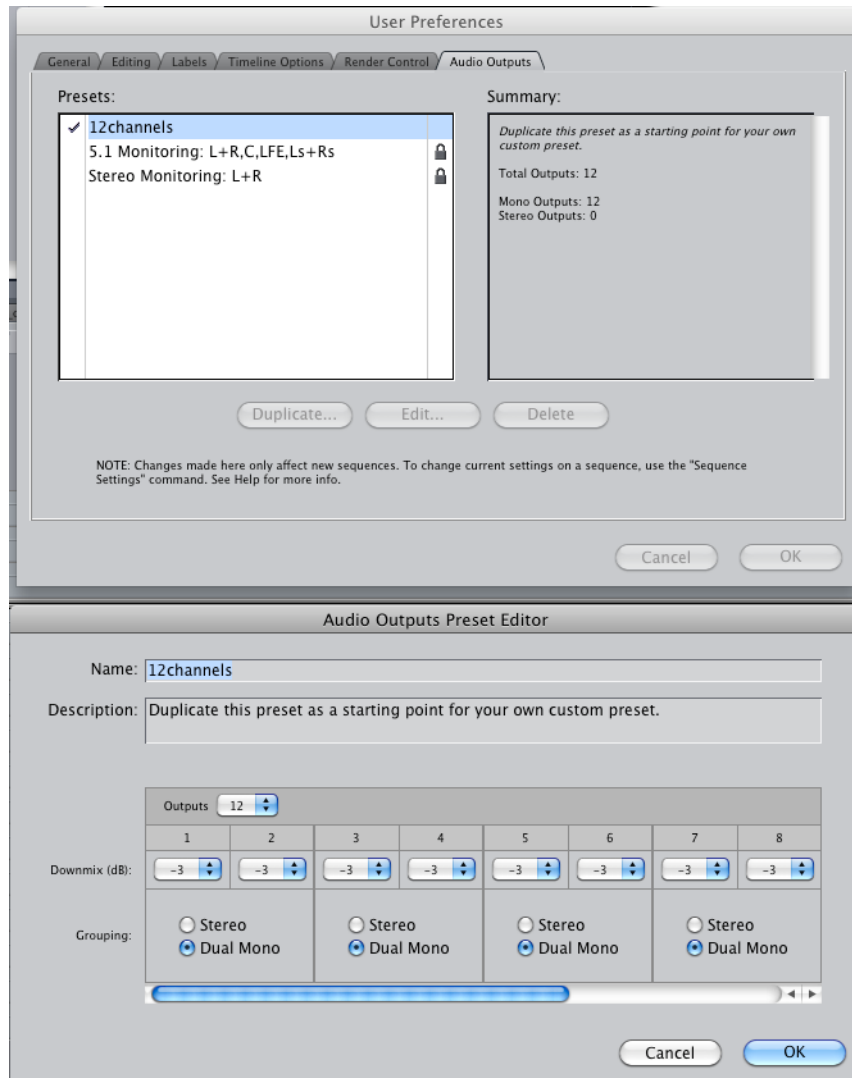
Note: Note that the assignment assumes stereo pairs. The tracks are mono, so Audio 1 and Audio 2 both are assigned to 1+2, and so on for Audio 3 and 4 both to 3 + 4, and so on for the amount of source tracks.

Ultimately, the Premiere Audio Mixer for this sequence should look like the mixer shown below. Each track has an assignment button, and they are assigned to successive stereo output in sets of two.

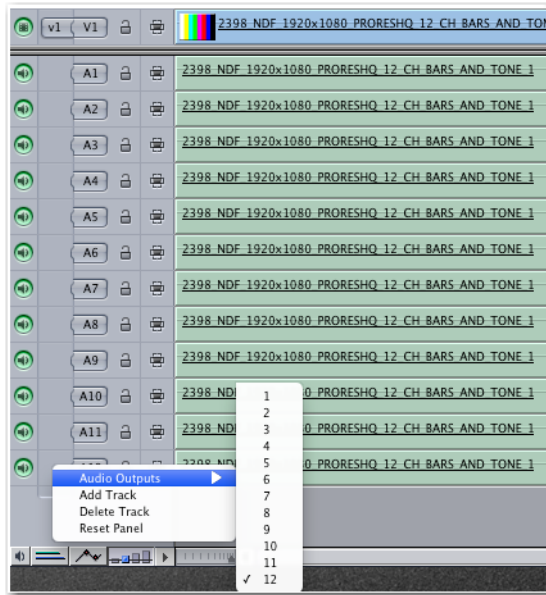


An imported sequence may not look like this, in which case, you must create and configure a new sequence that can handle multiple outputs.

In Final Cut, a sequence can be changed to use multiple audio channels. First, the Audio Outputs User Preferences must be set up for multichannel audio, as shown below.



Then, an existing sequence can be changed to use all the audio tracks, as shown here.



The Final Cut Pro 7 composer will use the audio mapping configuration from the XMEML to set up Mix sources and targets for the CML.

Creating a Dolby Pro Logic Mix from Discrete 5.1 Audio

This example illustrates how you can decode and mix a Dolby Pro Logic mix from a source with discrete 5.1 audio channels into your output to make a left/right stereo pair for Pro Logic compatibility.

```
...
<Source identifier="1">
<File location="\share\path\5.1-audio-discrete-channels.mov"/>
<!-- Configuration assumes the source channels 1-6 are ordered
Left, Right, Center, LFE, Left surround, Right surround -->
<!-- Mix Left (1 and 2) > Stereo Left and Right (1 and 2) -->
  <Mix source="1 2" target="1 2" phase="0°" />
<!-- Mix Center (3) > Stereo Left and Right (1 and 2) at -3 dB -->
  <Mix source="3" target="1 2" level="0.707107" phase="0°"/>
<!-- Mix Left Rear(5)>Stereo Left(1)-1.2 dB phase shift -90 deg-->
  <Mix source="5" target="1" level="0.87178" phase="-90°"/>
<!-- Mix Left Rear(5)>Stereo Right(2) -6.2 dB phase shift -90 deg-->
  <Mix source="5" target="2" level="0.489898" phase="-90°"/>
<!-- Mix Right Rear(6)>Stereo Left(1) -6.2 dB phase shift 90 deg-->
  <Mix source="6" target="1" level="0.489898" phase="90°"/>
<!-- Mix Right Rear(6)>Stereo Right(2) -1.2 dB ph shift 90 deg-->
  <Mix source="6" target="2" level="0.87178" phase="90°"/>
</Source>...
```

Upmixing 2-channel Dolby Pro Logic Source to Discrete Channels for 5.1 Surround Encoding

This topic illustrates a set of Mix elements, showing how you can synthesize a 5.1 Surround audio program into your output from a left/right stereo pair of 2-channel Dolby Pro Logic audio. This mix configuration basically reverses the algorithm applied in [Creating a Left/Right Downmix for Pro Logic Compatibility from Decoded Dolby E Audio](#).

```
...
<Source identifier="1">
  <File location="\\share\path\source with stereo audio.mov"/>
  <!-- distribute stereo to 6 channel audio track in conform -->
  < Mix source= "1" target= "1" level= "1.0" phase= "0°" />
  < Mix source= "2" target= "2" level= "1.0" phase= "0°" />
  < Mix source= "1" target= "3" level= "0.5" phase= "0°" />
  < Mix source= "2" target= "3" level= "0.5" phase= "0°" />
  < Mix source= "1" target= "4" level= "0.7071" phase= "0°" />
  < Mix source= "2" target= "4" level= "0.7071" phase= "0°" />
  < Mix source= "1" target= "5" level= "0.8718" phase= "90°" />
  < Mix source= "2" target= "5" level= "0.4819" phase= "90°" />
  < Mix source= "1" target= "6" level= "0.4819" phase= "-90°" />
  < Mix source= "2" target= "6" level= "0.8717" phase= "-90°" />
</Source>
```

Ad Insertion

This chapter describes a BlackArrow ad insertion application.

- [BlackArrow SCTE-35 Ad Insertion Workflow](#)

Note: All of the examples in this guide are complete compositions. To test them, you can copy and paste the example into a text editor. Change the references to the media files you are supplying, and save the file as XML. Then, submit it to a suitable Post Producer workflow.

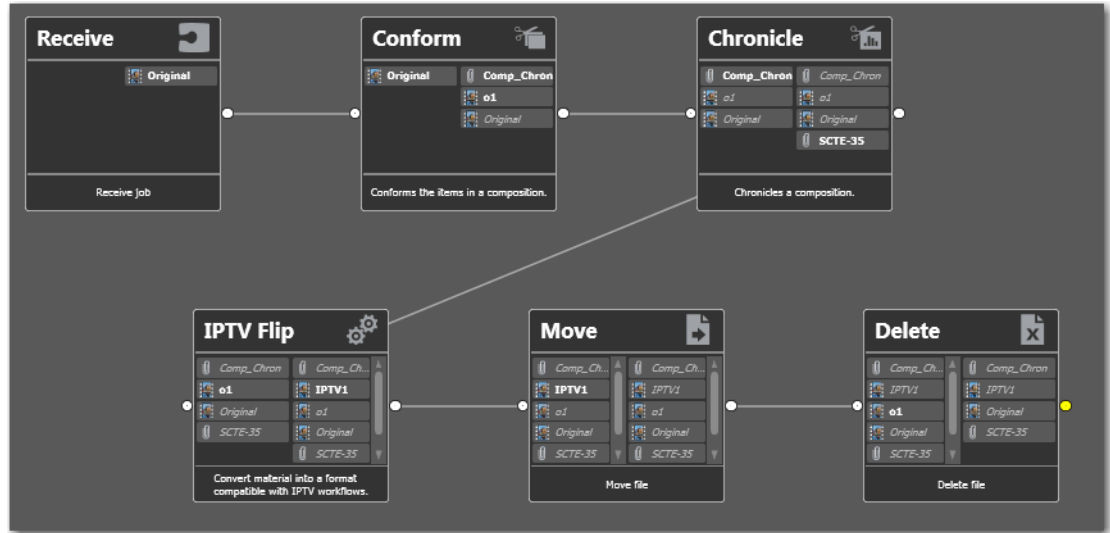
A library of composition examples and media generated by the composition are provided to illustrate various features of Post Producer. To access these examples, go to the www.telestream.net Web site and log in as an authorized user.

Click on the Post Producer link and select the CML examples tab to view each CML example, which includes the CML file, the exported workflow it can be processed with, source media, and a sample proxy video clip that was produced from it.

BlackArrow SCTE-35 Ad Insertion Workflow

This prototypical workflow ingests a Composition file, which is which is processed by the Conform action configured to generate an As Run CML file. The As Run CML is processed by a Chronicle action to create an SCTE-35 compatible file, for delivery to a BlackArrow ad insertion system.

The output is transcoded into Manzanita format, and moved to a production server.



This workflow implements the following actions to perform these tasks:

Receive—The Receive action starts jobs when you submit a composition file for processing. The Receive action is used so that you can submit jobs from other workflows, programs, or systems using the Vantage SDK. If this type of submission is not required, you can replace this with a Watch action.

Conform—The Conform action processes the ingested CML file, generating an MPEG4 file from the MPEG video with AAC audio. It is also configured to create an As Run CML file, for use in Black Arrow SCTE-35 ad insertion systems.

Chronicle—The Chronicle action uses the incoming As Run CML file to create an SCTE-35 file. The action is configured to write the file to a Black Arrow folder for pickup by the Black Arrow system.

IPTV Flip—The IPTV Flip action wraps the MPEG4 media in a Manzanita wrapper, for use in IPTV media processing workflows.

Move—The Move action moves the file to an appropriate production server.

Delete—After the Move action completes, the Delete action deletes the mezzanine MPEG4 file generated by the Conform action.

Miscellaneous Applications

This chapter provides examples of compositions and workflows that are used in a wide range of Post Producer applications.

- [Simple Conforming Workflow](#)
- [Agility Compose and Conform Workflow](#)
- [Submitting Jobs with Workorders](#)
- [Using Variables in Conform Workflows](#)
- [Adding Titles](#)
- [Adding a Content Advisory](#)
- [Adding an Overlay](#)
- [Encoding QuickTime Files with Clean Aperture Set](#)

All of the examples in this guide are complete compositions. To test them, you can copy and paste the example into a text editor. Change the references to the media files you are supplying, and save the file as XML. Then, submit it to a suitable Post Producer workflow.

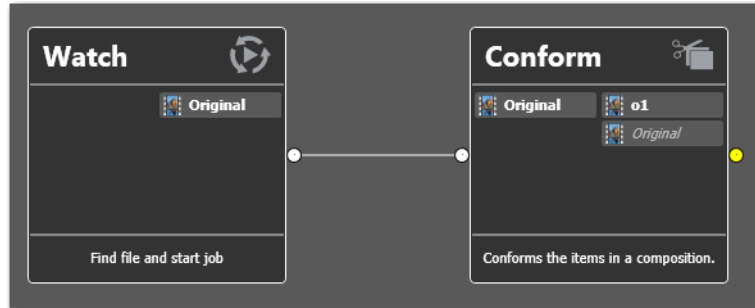
A library of composition examples and media generated by the composition are provided to illustrate various features of Post Producer. To access these examples, go to the www.telestream.net Web site and log in as an authorized user.

Click on the Post Producer link and select the CML examples tab to view each CML example, which includes the CML file, the exported workflow it can be processed with, source media, and a sample proxy video clip that was produced from it.

Simple Conforming Workflow

This workflow is a basic Post Producer conform workflow, where you submit a composition file for encoding.

You can use this basic workflow as the basis of all other conforming workflows; you add and configure other actions to create a workflow that meets your operational requirements.



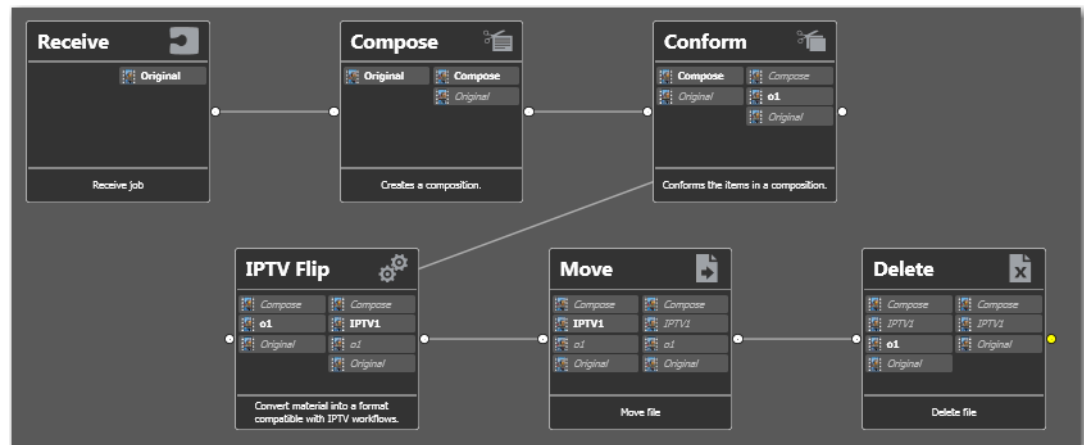
This workflow utilizes the following actions to perform these tasks:

Watch—The Watch action starts jobs when you submit a composition file for processing. The Watch action can be configured to watch a wide variety of systems for files; commonly a conforming workflow would monitor a Windows computer or share for CML files. Under the File Match Pattern, you could specify *.cml | *.xml to only pick up files with these extensions. You can replace Watch with a Receive action, so that you can submit jobs from other workflows, programs, or systems using the Vantage SDK.

Conform—The Conform action processes the CML file, generating an MPEG, QuickTime, or TIFO file from six different supported video formats and three audio formats (see *Post Producer and Related Formats* in the *Post Producer Developer's Guide*). If you require your output in other formats, just add a Flip, IPTV VOD, or Multiscreen Flip action after the Conform action to encode the output into the required format.

Agility Compose and Conform Workflow

This prototypical workflow ingests an Agility AN2 file and converts it to CML, which is processed by the Conform action. The output is transcoded into Manzanita format, and moved to a production server.



This workflow utilizes the following actions to perform these tasks:

Receive—The Receive action starts jobs when you submit an AN2 file for processing. The Receive action is used to submit jobs from other workflows, or programs using the Vantage SDK. If this type of submission is not required, you can replace this with a Watch action.

Compose—The Compose action automatically converts the AN2 file (or other media descriptor files, such as TSEDL) into a CML file for processing by the Conform action. File names are unchanged, so the Edit service that processes the CML file must have access to the input media files specified in the AN2 file.

Conform—The Conform action processes the auto-generated CML file, from the Compose action, generating an MPEG4 file from the MPEG video with AAC audio.

IPTV Flip—The IPTV Flip action wraps the MPEG4 media in a Manzanita wrapper.

Move—The Move action moves the file to an appropriate production server.

Delete—After the Move action completes, the Delete action deletes the mezzanine MPEG4 file generated by the Conform action.

Submitting Jobs with Workorders

This example illustrates how you can submit multiple jobs to a workflow, at the same time. (For an introduction to batch processing jobs using workorders, see *Batch Processing Jobs with Workorders* in the *Post Producer Developer's Guide*).

When using workorders, you need:

- A Workorder-based Post Producer workflow (workorders can be processed in any workflow that starts with a Workorder action—the example here focuses on Post Producer of course.)
- One or more CML files to use processing jobs
- A schema to define the workorder format
- A workorder file with one or more jobs that matches the schema
- Media for processing by the jobs you submit.

Sample Composition

This composition renders a title on video, in various languages. The same baseline media is used in every job. Only the title text changes. It is identified in the CML as `$welcome_overlay`.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="1">
    <File location="//share\PostProducer\Source\1_A2_Show_ONLY_NO-
GFX2.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Title align="head" adjust="edge" fill="none" layer="2"
duration="00:00:04.00" offset="00:00:01.000" font="Helvetica"
size="50pt" style="italic" weight="bold"
foreground-color="bisque" background-color="transparent"
wrap="false" horizontal-align="left" vertical-align="middle"
layout="stretch">
        <Area top="70%" left="20%" bottom="90%" right="80%" />
        <Shadow color="black" softness="10%" vertical-offset="2%"
horizontal-offset="2%" />
      <!-- This variable (welcome-overlay) is resolved from a column in
the workorder, which is used in the workflow to apply the text
using the Title element -->
        {$welcome_overlay}
      </Title>
      <Image align="head" adjust="body" fill="none" layer="1"
location="//share\PostProducer\Source\frame-000000.png"
frames="132" duration="00:00:00.000" layout="stretch">
      </Image>
      <Video align="head" adjust="edge" fill="none" source="1"
layer="0">
      <Head>
        <Edit time="00:00:00.000" />
      </Head>
    </Segment>
  </Sequence>
</Composition>
```

```
</Head>  
<Tail>  
  <Edit time="00:00:07.000" />  
</Tail>  
</Video>  
</Segment>  
</Sequence>  
</Composition>
```

In workorder applications, your compositions and media are typically stored in folders that are not the target of any workflow origin action. Instead, you identify the composition(s) by a fully-qualified path, in each job in the workorder.

Depending on the application, you can also specify one or more common media files in the CML (by fully-qualified path) or you can use a variable, and supply the unique file name of the media in the job, along with any other variables you need to conform the media.

When this CML is processed by the conform action, the variable is replaced by the text in the third column of each job in the workorder file submitted.

Sample Workorder File

```
title_from_csv,CML_source,overlay_from_csv
```

```
Dutch,D:\CML\Lower Third With Text.cml,welkom op IBC
```

```
English,D:\CML\Lower Third With Text.cml>Welcome to IBC
```

```
Spanish,D:\CML\Lower Third With Text.cml,Bienvenido a IBC
```

```
Italian,D:\CML\Lower Third With Text.cml,Benvenuti a IBC
```

```
French,D:\CML\Lower Third With Text.cml,Bienvenue a IBC
```

```
German,D:\CML\Lower Third With Text.cml,Herzlich Willkommen auf  
der IBC
```

Using Variables in Conform Workflows

In Post Producer workflows, it is standard procedure to submit a CML file (composition)—instead of media—to a Conform workflow. The media, instead, is referenced inside the CML and the Conform action identifies it and ingests it using this method. Thus, there is no opportunity to analyze or otherwise process the media file prior to the Conform action to obtain runtime values.

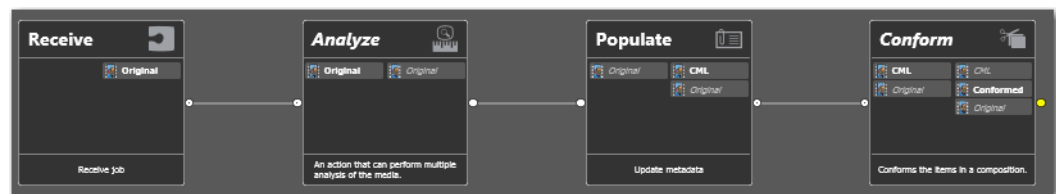
In this novel approach, the media is submitted directly, much like any other transcoding workflow. Now, we can use an Analyze action (or other methods) to obtain the values we need. For example, video height and width, and frame rate.

How do we ingest the CML then? The CML is ingested using the Populate action. And, the media is referenced by nickname, not a fully-qualified path in the CML.

Note: The Populate action identifies the file to ingest as a fully-qualified path, limiting its use. For more flexibility in ingesting a media file in this same scenario, use the Associate action with the Media Files option. This allows you to specify the file to ingest by using a filtering value in the Accept Pattern control.

In this example, we need to know the frame size and rate of the media so that it can be processed correctly.

This workflow shows you how you can obtain run-time values from media being utilized in CML.



The key to success in this workflow is revealed in this prototype composition, where the media is referred to using the *Original* nickname.

```
<<?xml version="1.0" encoding="utf-8"?>
<Composition name="" version="1.0" created="2014-02-
12T18:41:16.1973932-05:00"
xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="0" timecode="ltc">
    <File location="{ $#Original}" />
  </Source>
  <Sequence>
    <Segment>
      <Video source="0" />
    </Segment>
  </Sequence>
</Composition>
```

This workflow utilizes the following actions to perform these tasks:

Receive—The Receive action starts jobs when you manually submit a file for processing. It is assigned the nickname *Original*. (It could just as effectively be a Watch action). In this case, we submit the media file for processing instead of the CML.

Analyze—The Analyze action is configured to extract the frame size and frame rate, and assign the values to three variables: Video Width, Video Height, and Video Framerate.

Populate—The Populate action is configured with the Item to File option, which enables you to select a file and assign it a nickname (*CML*, in this case), making it available to the Conform action.

Conform—The Conform action processes the CML file, generating an MPEG, QuickTime, or TIFO file from six different supported video formats and three audio formats (see *Post Producer and Related Formats* in the *Post Producer Developer's Guide*). The main media file is referenced with a nickname in the MCL, *Original*, which is already present in the workflow.

Adding Titles

Titles are a frequent element of many promos. These examples show you some typical applications of titles you can adapt to your own requirements.

Adding a Basic, Static Title

This example illustrates how to set the area exactly where you want it displayed, using the Area element, set off the left edge 10%, slightly taller than the font for good measure. For this example, the background rectangle of the text (not the Area—just the text rendering rectangle) is set to blue so it stands out.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <!-- Basic Title DUR=NA, AR=16x9, res. 1920x1080 -->
  <!-- Input: 1080i -->
  <!-- Output: 1080i x264 -->
  <!-- Conforming Workflow: 1080 + proxy -->
  <Source identifier="1">
    <File location="//share\path\1_A2_Show_ONLY_NO-GFX2.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Title align="head" adjust="edge" fill="none" layer="1"
duration="00:00:006.00" font="Helvetica" size="50pt"
style="italic" weight="bold" foreground-color="bisque" background-
color="blue" wrap="false" horizontal-align="center" vertical-
align="middle" layout="none">
        <Area top="10%" left="20%" bottom="60px" right="80%" />
        <Shadow color="gold" softness="10%" vertical-offset="6%"
horizontal-offset="6%" />
        Post Producer Titles
      </Title>
      <Video align="head" adjust="edge" fill="none" source="1"
layer="0" />
    </Segment>
  </Sequence>
</Composition>
```

Sliding a Title On or Off Screen

This example illustrates how to set the title to an offscreen value (using a negative percent value), and then move the title onscreen, using a head/body/tail Translation. Also note the use of the motion-blur to smooth the motion.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <!-- Up Next Promo DUR=1 min 16x9 1920x1080 DolbyE 5.1+2 -->
  <!-- All PNG files: 600 x 420 -->
  <!-- Input: 1080i -->
  <!-- Output: 1080i x264 -->
  <Source identifier="1">
    <File location="//share\path\1_A2_Show_ONLY_NO-GFX2.mov" />
  </Source>
```



```
<Sequence>
  <Segment>
    <Title align="head" adjust="edge" fill="none" layer="2"
duration="00:00:006.00" font="Helvetica" size="50pt"
style="italic" weight="bold" foreground-color="bisque" background-
color="blue" wrap="false" horizontal-align="left" vertical-
align="middle" layout="stretch">
      <Area top="0%" left="20%" bottom="90%" right="80%" />
      <Shadow color="gold" softness="10%" vertical-offset="6%"
horizontal-offset="6%" />
    Post Producer Titles
    <Head>
      <Opacity level="100%" />
      <Translation x="00%" y="-20%" />
      <Fade duration="00:00:02.000" motion-blur="3" />
    </Head>
    <Body>
      <Translation x="0%" y="50%" />
    </Body>
  </Title>
  <Video align="head" adjust="edge" fill="none" source="1"
layer="0">
    <Head>
      <Edit time="00:00:00.000" />
    </Head>
    <Tail>
      <Edit time="00:00:07.000" />
    </Tail>
  </Video>
</Segment>
</Sequence>
</Composition>
```

Adding a Content Advisory

You add a content advisory (an Advisory element) to a segment to provide USTV, MPAA, CELR, or CFLR V-chip encoding to a segment, and optionally provide a graphic on your video, as shown below.

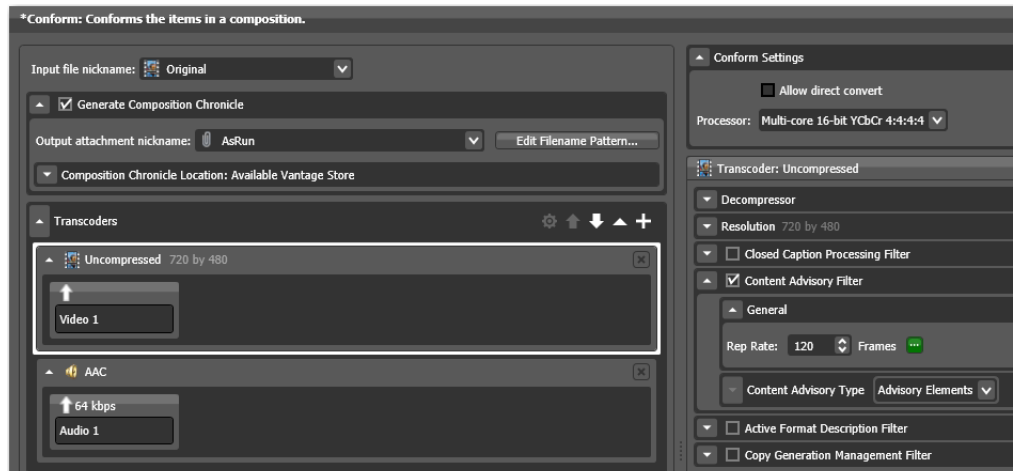


When using the USTV rating system, Post Producer allows you to use default icons, such as this one:



The icon displayed is determined by the rating you specify using the *rating* attribute. You can override the default icons by supplying your own, supplying the element with a *location* attribute. When using other rating systems, you must supply your own icons.

When you add a content advisory, you also need to enable the Content Advisory filter in the Transcoder section of the Conform action, so that the rating information you've configured in the Advisory element is inserted properly into the VANC.



Example

This example creates a promo for a movie with a USTV rating of TV-14, FV. It uses the default icon for the rating supplied, and fades in and displays it in the upper left corner for 5 seconds.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition xmlns="Telestream.Soa.Facility.Playlist">
  <!-- Up Next Promo DUR=1 min 16x9 1920x1080, DolbyE 5.1+2 -->
  <!-- All PNG files: 600 x 420 -->
  <!-- Input: 1080i -->
  <!-- Output: 1080i x264 -->
  <!-- Conforming Workflow: 1080 VOD -->
  <Source identifier="1">
    <File location="//<share>\<path>\My_TV_14_S_Show_Promo.mov" />
  </Source>
  <Sequence>
    <Segment>
      <Video source="1" layer="0" />
      <Advisory align="head" adjust="body" fill="none" layer="1"
duration="00:00:05.000" type="USTV" rating="TV-14 FV">
        <Head>
          <Fade duration="00:00:02.000" />
        </Head>
        <Body>
          <Translation x="5%" y="5%" />
        </Body>
      </Advisory>
    </Segment>
  </Sequence>
</Composition>
```

Because the default *layer* is 0, a layer attribute should be added to the Advisory. To display the icon on top of all other visual material, it should be the highest numbered of all the material in the segment. For the same reason, you need to add a *duration*, so that the advisory logo displays for the time you specify, in the format HH:MM:SS.SSS.

You can supply a single rating value, or multiple rating values, by separating each value in the string with a space. For example, "TV-14 FV" represents *Parent Strongly Cautioned + Fantasy Violence*. Post Producer displays the proper icon for your rating. If it is not a logical combination, no icon is displayed.

Adding an Overlay

You add a content advisory (an Advisory element) to a segment to provide USTV, MPAA, CELR, or CFLR V-chip encoding to a segment, and optionally provide a graphic on your video, as shown below.



When using the USTV rating system, Post Producer allows you to use default icons, as shown below. The icon displayed is determined by the rating you specify using the *rating* attribute. You can override the default icons by supplying your own, with a *location* attribute. When using other rating systems, you must supply your own icons, as shown in this example.

Encoding QuickTime Files with Clean Aperture Set

If you are encoding a QuickTime file with the clean aperture set, in Vantage 7.0, the clean aperture setting is ignored. However, in 7.1 or later, it is applied, resulting in a slight upscaling of the frame.

To disable the clean aperture, implement a Crop with no values. Using this technique results in the file being transcoded without adjusting the frame.

Example

This example illustrates the source file with a Crop without parameters, to disable the clean aperture setting in the source file and keep the frames from being resized.

```
...  
<Source identifier="0">  
<File location="\\MediaServer\share\1080_59.94_grid.mov" />  
<Crop />  
</Source>  
...
```

