Episode

Application Note

# Using Episode to Create Streaming Media

telestream

# Overview

MBR is an abbreviation of Multi Bit Rate which is a technology currently used by DASH Streaming, Apple's HTTP Live Streaming, and Microsoft's Smooth Streaming. MBR workflows consist of at least one Encode task (with a deployment) that gets submitted to at least one MBR task. To utilize the streaming technologies better, at least three different Encode tasks with different bit rates should be used. Encode tasks can only be created in the Episode GUI application and should be configured to produce a TIFO (Telestream Intermediate Format) output. TIFO is a format that the MBR task can take as input.

Apple's HTTP Live Streaming can be produced on both Mac OS X and Microsoft Windows platforms, while Microsoft's Smooth Streaming can only be produced on the Windows platform. *Produced*, in this context, means that the MBR task configured to output Smooth Streaming must run on a Windows computer. The individual Encode tasks can run on either platform.

# Encoding MBR Files

The following procedure explains how to create MBR streaming outputs using the Mac and Windows user interfaces (UI). For each step, Mac and Windows screens are shown.
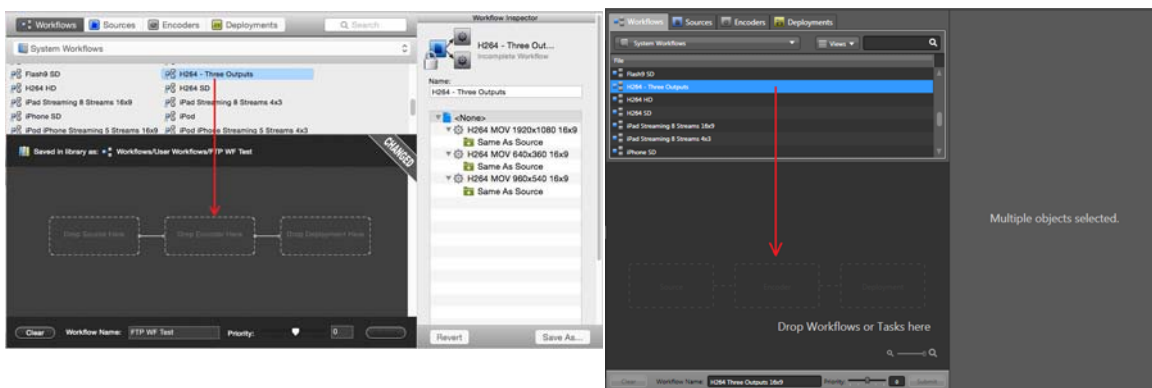
## Create MBR Tasks

To begin, create an MBR task for each streaming output you want to produce. In this example, three parallel encoder tasks are created to produce HTTP Live Streaming (HLS), SmoothStreaming, and DASH outputs. .
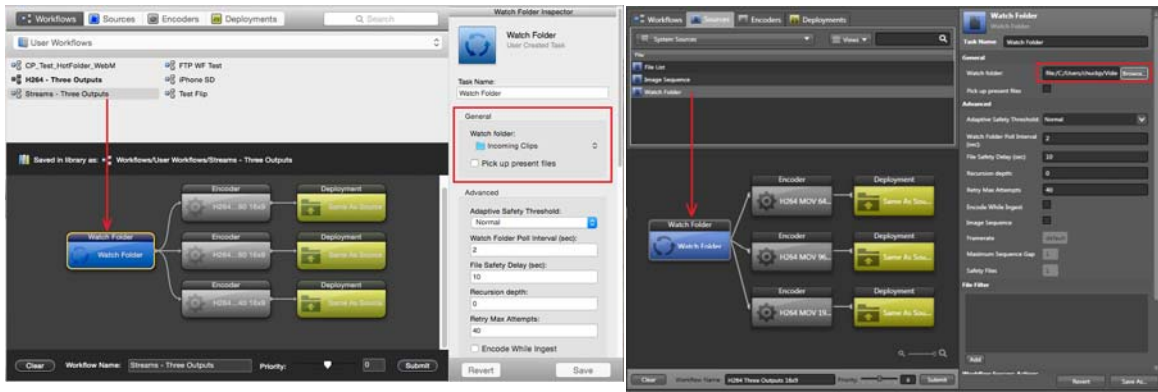
### Creating Tasks in the User Interface

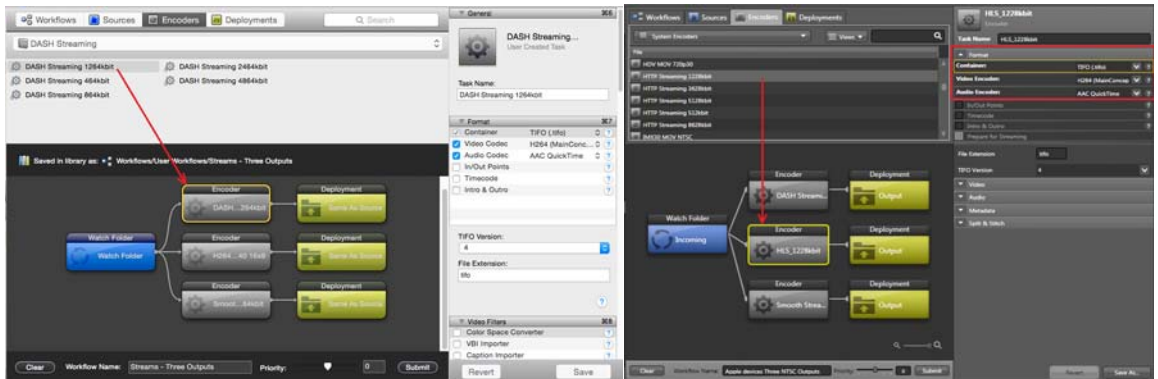Create a workflow as shown in the following figure.

1. Drag a workflow from the Workflows tab into the Workflow panel. There are multiple output workflows you can use as a starting point and modify, such as *H264 - Three Outputs* or *iPad Streaming 8 Streams*. These workflows give you multiple parallel encoders.
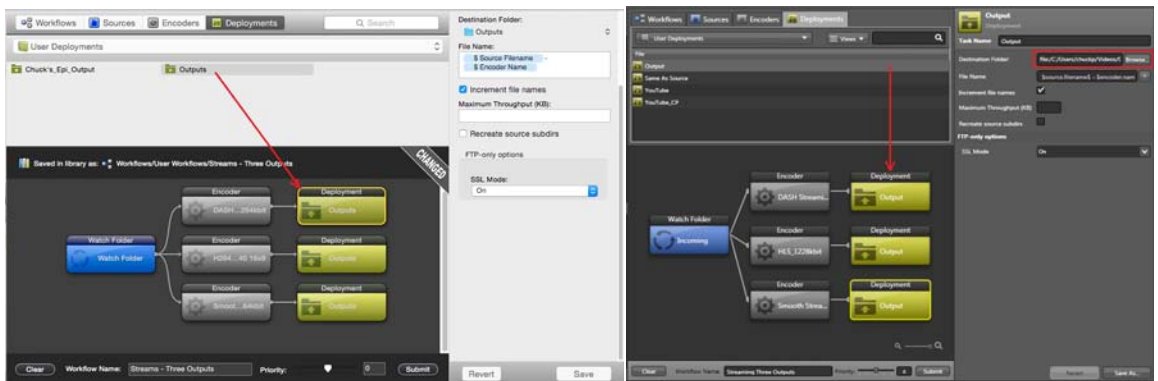
**2.** Drag a Watch Folder or File List from the Sources tab to the Source Task in the workflow. Click on the Source Task and browse for a folder location in the Inspector.



**3.** Drag encoders from the Encoders tab to the Encoders Tasks in the workflow to replace the default encoders. You will find encoders for HTTP Streaming, SmoothStreaming, and DASH Streaming at different bit rates. You can encode different stream formats, or you can encode one stream format at different bit rates.



**4.** Drag output locations from the Deployments tab to the Deployment Tasks in the workflow. Click on the Deployment Task and browse for a folder location for the output.
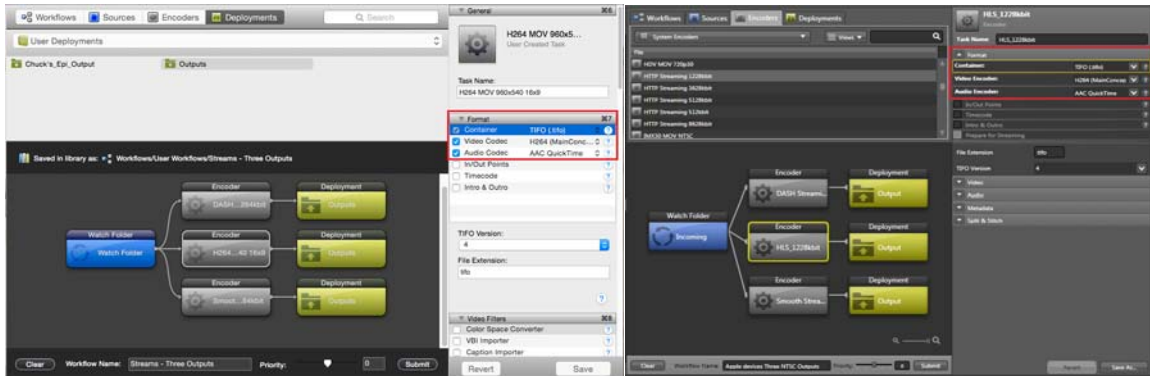
# Configure Encode Tasks

Next, configure Encode tasks to output TIFO files as input for the MBR tasks.

## Configuring Encoders in the UI

Click on each of the three encoder tasks and configure them in the Inspector. The container is TIFO, and the video and audio encoders can be set as you prefer.
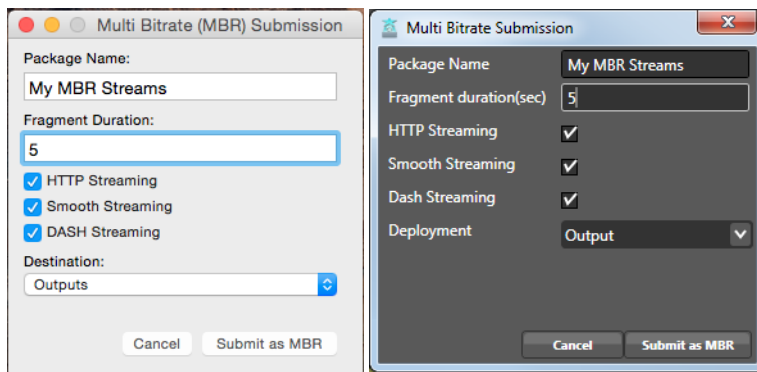


You're now finished creating the workflow, so you may want to save it as a User Workflow. To do so, right-click in the workflow area and select *Save Workflow As....* Enter a name and save the workflow.

# Submit Workflow

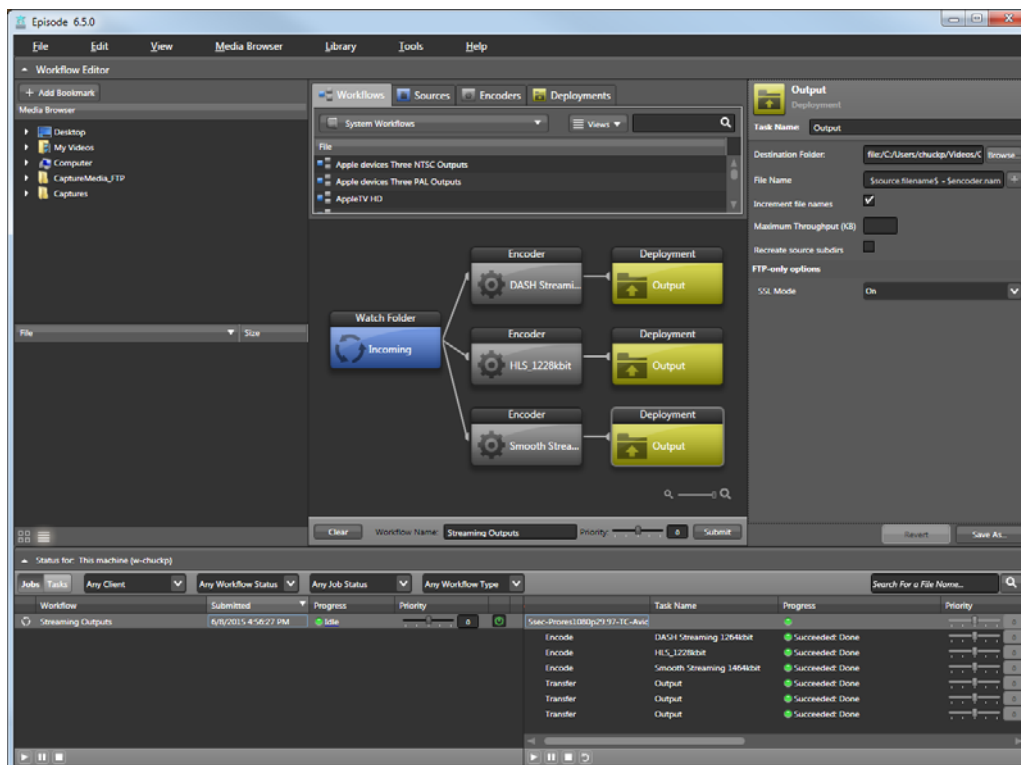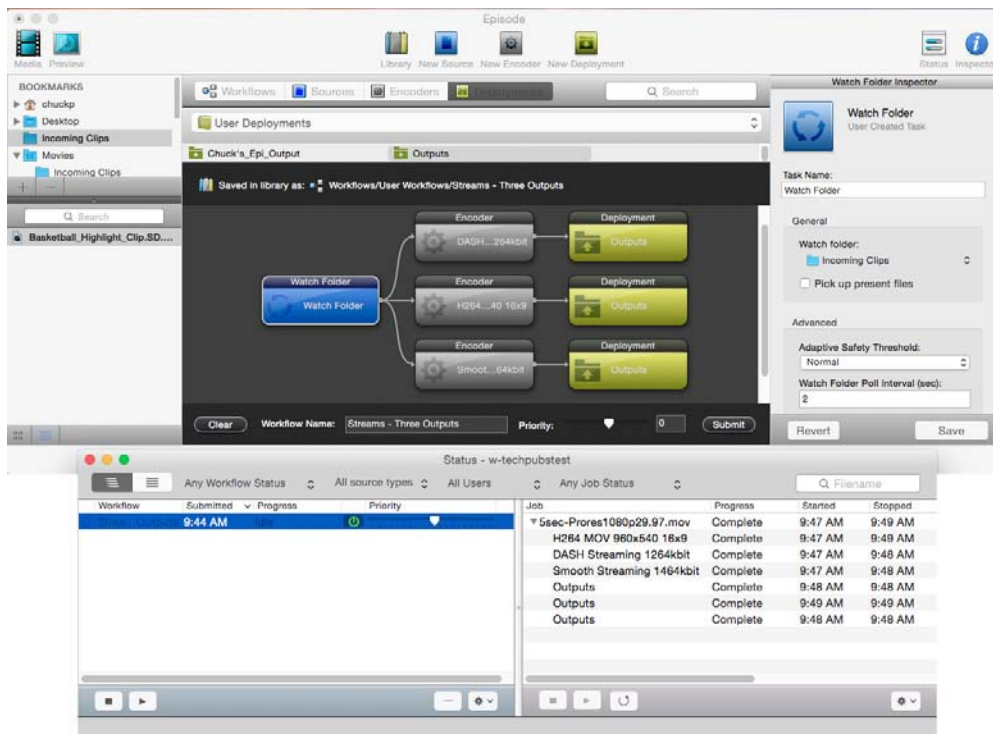Next, submit the workflow as multi-bit-rate jobs.

## Submit Workflow as MBR in the UI

1. Select the Window menu on a Mac or the Tools menu in Windows.
2. Select Submit Workflow as MBR. You can also right-click in the workflow panel and select Submit as MBR. The MBR configuration window shown below opens.
3. Enter a name for the stream package, enter the number of seconds duration for each stream segment, check the streaming formats you want to output, and select the Deployment folder from the drop-down menu.

# Output Results

The following screen shot shows the Status panel displaying the completed job with the three streaming outputs (HLS, DASH, and SmoothStreaming) available in the deployment location.

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