



Launch™ Media Portals and Windows Media 9 Series Encode Settings

This application note covers three default Media Portals to be used for transcoding media to the Windows Media 9 Series format for transmission with Telestream's Launch™ media delivery application. These default portals are designed as a starting point. Experimentation might be needed to determine the optimal Media Portal settings for your situation and application. Also, integration with Telestream's FlipFactory is described to optimize delivery to other systems.

Generally, there are three factors involved in selecting a Media Portal. They are:

Picture quality is typically a high priority. All the default Media Portals described below produce a quality image, however, depending on the type of motion, there could be issues with motion artifacts.

Transcode times are most affected by frame size and bit rate. If your deadline is such that you will need to minimize the time it takes to transcode, select the Media Portal that will transcode the fastest. Note that file size will affect the time to send as well.

File Size is directly related to the bit rate. When selecting a Media Portal be aware that the higher the bit rate the larger the file size will be. Larger files take longer to deliver than smaller ones. Keep this in mind when selecting a Media Portal.

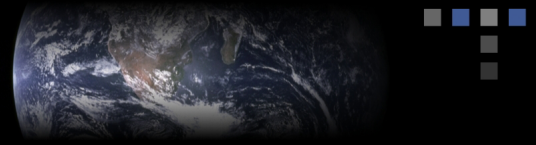
***Note** that the combined transcode and delivery times can be optimized by selecting "send while transcoding."*

Below are three suggested Launch™ Media Portal properties. Estimated file size, transcode times and delivery times for each Media Portal have been included to help you make the appropriate Media Portal selection.

Low Motion / Talking Head – Good Quality

This Media Portal is designed for low motion and/or a static image such as a "talking head." It should be used for media that contains a generally static image or background such a reporter relaying a story. Use this Media Portal when you have a deadline that might not be met by the Fast Motion portal or the Average Motion portal.

- **Estimated File size**
 - 15MB per minute of source media
- **Estimated Transcode time**
 - 1:35 minutes per minute of source media
- **Estimated Delivery time**
 - Dial up at 56Kbps – 35:20 per minute of source media
 - ISDN at 128Kbps – 15:37 per minute of source media
 - xDSL at 384Kbps – 5:44 per minute of source media
 - Business HDSL at 1Mbps – 2:00 per minute of source media
 - T1 at 1.5Mbps – 1:19 per minute of source media



This Media Portal produces a file size that is approximately 50% smaller than the Fast Motion portal, and it can be flipped (transcoded) approximately 85% faster than the Fast Motion portal.

Launch Media Portal codec and filter parameters:

Windows Media 9 codec, 360x480i @ 2Mbps

Video Codec Settings:

Output Interlacing – Lower Field First

Bite Rate – 2,000,000

Height – 480

Key Frame – 2

Frame Rate – 29.97

Sharpness – 50

Width – 360

Audio Codec Settings:

Audio Profile – 192Kbps, 44 KHz, Stereo

Filter Settings

Input Frame – Type = Interlaced Lower Field First

Average Motion – Better Quality

This Media Portal is designed for average motion. It generally can be used with all media content and will produce a high-quality image. Use this Media Portal when you have a deadline that might not be met by the Fast Motion portal.

- **Estimated File size**
 - 22.5MB per minute of source media
- **Estimated Transcode time**
 - 1:55 per minute of source media
- **Estimated Delivery time**
 - Dial up at 56Kbps – 58:45 per minute of source media
 - ISDN at 128Kbps – 23:26 per minute of source media
 - xDSL at 384Kbps – 8:37 per minute of source media
 - Business HDSL at 1Mbps – 3:00 per minute of source media
 - T1 at 1.5Mbps – 2:00 per minute of source media

This Media Portal produces a file size that is approximately 33% smaller than the Fast Motion portal, and it can be flipped approximately 13% faster than the Fast Motion portal.

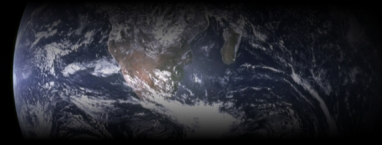
Launch™ Media Portal codec and filter parameters:

Windows Media 9 codec, 544x480i @ 3Mbps

Video Codec Settings:

Output Interlacing – Lower Field First

Bite Rate – 3,000,000



Height – 480

Key Frame – 2

Frame Rate – 29.97

Sharpness – 50

Width – 544

Audio Codec Settings:

Audio Profile – 192Kbps, 44 KHz, Stereo

Filter Settings

Input Frame – Type = Interlaced Lower Field First

Fast Motion – Best Quality

This Media Portal is designed for video that has fast motion such as fast action sports, news footage with rapid motion and other footage with fast motion or scene transitions. The media file size will be the largest of the three Media Profiles described in this document, and the flip time will also be the longest. If time permits, use this profile for all Launch™ applications to assure the highest quality.

- **Estimated File size**
 - 30MB per minute of source media
- **Estimated Transcode time**
 - 2:15 per minute of source media
- **Estimated Delivery time**
 - Dial up at 56Kbps – 1:18:06 per minute of source media
 - ISDN at 128Kbps – 31:15 per minute of source media
 - xDSL at 384Kbps – 11:29 per minute of source media
 - Business HDSL at 1Mbps – 4:00 per minute of source media
 - T1 at 1.5Mbps – 2:39 minutes per of source media

Launch™ codec and filter parameters:

Windows Media 9 codec, 720x480i @ 4Mbps

Video Codec Settings:

Output Interlacing – Lower Field First

Bite Rate – 4,000,000

Height – 480

Key Frame – 2

Frame Rate – 29.97

Sharpness – 50

Width – 720

Audio Codec Settings:

Audio Profile – 192Kbps, 44 KHz, Stereo

Filter Settings

Input Frame – Type = Interlaced Lower Field First



FlipFactory Setup

FlipFactory® is Telestream's powerful workflow automation application, which automatically converts formats and transfers media between professional devices such as edit systems and media servers.

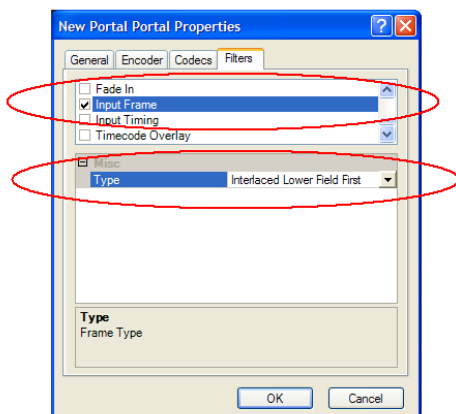
If the media files being delivered by Launch™ will be transcoded to MPEG-2 by a Telestream FlipFactory application for delivery to a Telestream ClipMail appliance or a video server, use the following parameters in order to get the highest quality video.

FlipFactory Codec parameters:

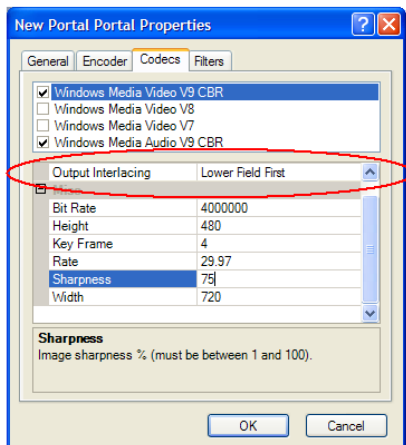
- MPEG-2 Program Stream (server specific)
 - Enable Interlacing Configuration
 - Interlaced Upper Field First
- Enabled Filters
 - Frame Mode – Interlaced Lower Field First
 - Field Order Conversion – Frame Line Shift Up

Notes when working with Launch, Avid NewsCutter XP and FlipFactory:

1. Within the Media Portal's WMV9 encoder the "Input Frame" filter should be set to specify that the input (the Avid QT Ref/DV file from NewsCutter) is lower field first. (If this is not present, Launch will assume an interlacing pattern of Upper field first based upon the NTSC dimensions).



2. Also within the Media Portal's WMV9 encoder setup, the "Output Interlacing" parameter should be set to create an interlacing pattern of lower field first on the output (i.e.: the output interlacing selection in the WMV encoder should indicate lower field first as the desired output interlacing format).



3. On FlipFactory, regardless of whether you are working with the Avid Transfer Manager DV encoder or the QT Avid DV encoder; both should have the “Frame Mode” filter present with the value of Interlaced Lower field first selected.

The only variable that would need to be experimented with would be the bit rate and frame size settings for the WMV encoder for Launch™ (knowing that the > the frame size the better the picture; but the slower the transcode).

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