



CHAPTER 7

Other Profiles

Revised: March 9, 2011

The Other Profile Class allows you to create the following types of profiles:

- [Index Profile, page 7-1](#)—Choose this option to set automatic scene detection parameters and optional thumbnail generation.
- [Thumbnail Profile, page 7-4](#)—Choose this option to define thumbnail generation frequency and thumbnail image format.

Index Profile

This section includes the following topics:

- [Introduction to the Index Profile, page 7-1](#)
- [Understanding Index Settings, page 7-1](#)
- [Adding an Index Profile to a Job Profile, page 7-4](#)

Introduction to the Index Profile

Adding an Index Profile to a Job Profile is optional. Scene change detection is a separately licensed feature of the Cisco MXE 3500.

The Index Profile is used to define parameters that specify how to perform scene change detection, whether to capture thumbnail images as representative samples of the scene changes, as well as the format, size, and quality of the thumbnail image(s). See also: [Introduction to the Thumbnail Profile, page 7-5](#).

Understanding Index Settings

An Index Profile allows you to adjust the following settings:

- [Common \(Index Profile\), page 7-2](#)
- [Scene Change Detection \(Index Profile\), page 7-2](#)
- [Thumbnail Properties \(Index Profile\), page 7-3](#)

Common (Index Profile)

Figure 7-1 shows Common settings. Table 7-1 describes the settings.

Figure 7-1 Index Profile: Common Settings

Table 7-1 Index Profile: Common Settings and Descriptions


Setting	Description
Profile Enabled	Check the box to enable this profile for job processing.
Audio Enabled	Enables audio output for this task. This is a required setting and cannot be changed.
Video Enabled	Enables video output for this task. This is a required setting and cannot be changed.
Task Mode	This is a required setting and cannot be changed. Standard: The Cisco MXE 3500 generates an intermediate uncompressed AVI file as the output of the preprocessing step.
User Data	The data entered in this field will appear anywhere \$(user-data) occurs in the XML. An example: If you want to include the title "Nightly News" in the output file name, you would, in the Encoder Profile, set User Data to: Nightly News. Then, in the Output Profile, set the Output Filename to include \$(userdata): As an example, in a Windows Media output, the result is a Nightly News.wmv file.

Scene Change Detection (Index Profile)

Figure 7-2 shows Scene Change Detection settings. Table 7-2 describes the settings.

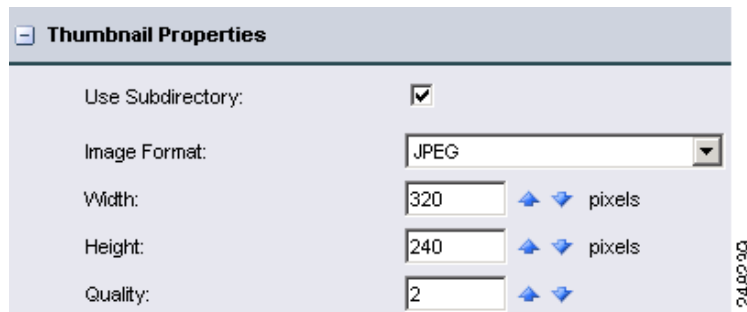
Figure 7-2 Index Profile: Scene Change Detection Settings

Table 7-2 Index Profile: Scene Change Detection Settings and Descriptions

Setting	Detection
Sensitivity	This setting controls the sensitivity to changes in the video program that will cause a scene change to be declared. A higher sensitivity setting will generate more scene changes; a lower sensitivity setting will generate fewer scene changes. Acceptable values range from 10 to 200, with 100 as the default. By clicking on the sensitivity number, higher sensitivities (up to 1000) can be entered manually.
At Least Every	Specifies a maximum time interval, in seconds, between scene changes. If a scene change is detected before the end of this interval, the time is reset. The default value is 60 seconds and can be reset using the arrows or entering a time in seconds into the field.
At Most Every	Specifies a minimum time interval, in seconds, between scene changes. If a scene change is detected before the end of this interval, the time is reset. Until the period, measured from the time of the last scene-change, expires, no new scene change will be declared. This period is zero by default, meaning that there is no limit to how quickly scene changes can be declared (every frame).
	 <p>Note The At Most Every value must be greater than or equal to the At Least Every value.</p>

Thumbnail Properties (Index Profile)

Figure 7-3 shows Thumbnail Properties settings. Table 7-3 describes the settings.

Figure 7-3 Index Profile: Thumbnail Properties Settings


Thumbnail Properties

Use Subdirectory:

Image Format: JPEG

Width: 320 pixels

Height: 240 pixels

Quality: 2

24:00:00

Table 7-3 Index Profile: Thumbnail Properties Settings and Descriptions

Setting	Description
Image Format	Choose a graphic format for the thumbnail images from the drop-down list. Supported formats are: JPEG, PNG, BMP, TGA, TIFF
Width / Height	<p>These boxes determine the size of the thumbnail images.</p> <p>The first box specifies the thumbnail width, and the second box specifies the thumbnail height. By default, the setting is 320x240. The entire image from the video is resized to fit the set thumbnail dimensions. The images are taken after preprocessing, so any cropping or color corrections applied in the preprocessor will be evident in the thumbnails.</p> <p>The images may be stretched or compressed horizontally to fit the requested thumbnail dimensions. Cropping is not available. The graphics formats of the thumbnails assume square pixels, whereas video may not. So, for example, an NTSC video sized 720x480 output with a pixel aspect ratio of 0.9 should be considered a 4:3 image aspect ratio, resulting in a thumbnail with dimensions 160x120.</p> <p>Thumbnails have a minimum size of 80x60 pixels.</p>
Quality	<p>Sets the image quality for JPEG thumbnails only.</p> <p>Options are: 1,2,3,4. The higher numbers correspond to higher image quality and require larger file sizes for the thumbnails.</p>

Adding an Index Profile to a Job Profile

Procedure

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- Step 1** From the Toolbox, click Profile Management > New Profile or Open Profile.
 - Step 2** From the **Profile Class** drop-down, select **Job**, and click the **New Profile** or **Open Profile** button.
 - Step 3** Expand the **Encoding** section, and scroll down to the **Index** box.
 - Step 4** Highlight one or more individual Index Profiles. As they are selected, the Index Profiles are added to the Job Profile in the upper pane.
 - Step 5** Click **Save**.
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Thumbnail Profile

This section includes the following topics:

- [Introduction to the Thumbnail Profile, page 7-5](#)
- [Understanding Thumbnail Settings, page 7-5](#)
- [Adding a Thumbnail Profile to a Job Profile, page 7-8](#)

Introduction to the Thumbnail Profile

Use a Thumbnail Profile to set up thumbnail images, specify their format, and specify the conditions for capturing them. Thumbnails are basically images from single frames of video. Despite the name, you may set the images to any size. The Thumbnail Profile also allows you to set up periodic thumbnail captures. See the [“Index Profile” section on page 7-1](#) if you want to trigger thumbnails on scene changes.

Thumbnails are placed in a subfolder of the Thumbnail Output Directory. All the thumbnails from one encoding job will be held in a subfolder. The subfolder is named according to the Cisco MXE 3500 naming conventions for output files. For example, if the output name is \$(basename).\$(profile).\$(subprofile).\$(extension), the thumbnail subfolder will be named \$(basename)_\$(profile)_\$(subprofile)_tmb with the periods converted to “_” and the \$(extension) converted to “_tmb”.

The subfolder will contain a text file with an .index extension that contains a list of the thumbnail files and times (measured from the beginning of the video clip) where the thumbnails were captured.

The thumbnail files themselves are named 0000.ext, 0001.ext, 0002.ext, ... etc, where “ext” is one of the allowed graphics formats. See also: Image Format in [Thumbnail Properties \(Index Profile\), page 7-3](#).

The OLD convention uses the Cisco MXE 3500 naming convention to name each thumbnail file. So, the example above produces a thumbnail named: \$(basename)_\$(profile)_\$(subprofile)0000.ext instead of 0000.ext.

Understanding Thumbnail Settings

The Thumbnail Profile is used to define parameters that specify when to capture thumbnail images, as well as the format, size, and quality of the thumbnail image(s). A Thumbnail Profile allows you to adjust the following settings:

- [Common \(Thumbnail Profile\), page 7-5](#)
- [Frame Selection \(Thumbnail Profile\), page 7-6](#)
- [Thumbnail Properties \(Thumbnail Profile\), page 7-8](#)

Common (Thumbnail Profile)

[Figure 7-4](#) shows common settings. [Table 7-4](#) describes the settings.

Figure 7-4 Thumbnail Profile: Common Settings

Common	
Profile Enabled:	<input checked="" type="checkbox"/>
Task Mode	standard
User Data	

Table 7-4 Thumbnail Profile: Common Settings and Descriptions

Setting	Description
Profile Enabled	Check the box to enable this profile for job processing.
Task Mode	This is a required setting and cannot be changed. Standard: The Cisco MXE 3500 generates an intermediate uncompressed AVI file as the output of the preprocessing step.
User Data	The data entered in this field will appear anywhere \$(user-data) occurs in the XML. An example: If you want to include the title "Nightly News" in the output file name, you would, in the Encoder Profile, set User Data to: Nightly News. Then, in the Output Profile, set the Output Filename to include \$(userdata). As an example, in a Windows Media output, the result is a Nightly News.wmv file.

Output

Output Name Enabled:

Output Filename:

Frame Selection (Thumbnail Profile)

Figure 7-5 shows Frame Selection settings. Table 7-5 describes the settings.

Figure 7-5 Thumbnail Profile: Frame Selection Settings

Frame Selection

Use Thumbnail Frequency:

Thumbnail Frequency: secs

Use Thumbnail Number:

Thumbnail Number:

Generate Single Thumbnail:



Note

Any or all of the above options can be used together in the profile.

Table 7-5 Thumbnail Profile: Frame Selection Settings and Descriptions

Setting	Description
Use Thumbnail Frequency	Check this box to capture thumbnails within the period entered in the field below. The default period is 10 seconds, meaning that every ten seconds an image is captured. The number of images captured depend on the length of the video clip, and will be approximately $(\text{Clip Length})/(\text{Thumbnail Period})$.
Thumbnail Frequency	When the Use Thumbnail Frequency box is checked, the time in this field determines the spacing between captured images. If the time of a requested thumbnail does not match the time of any video frame, the nearest frame is selected. The time must be greater than zero.
Use Thumbnail Number	Check this box to enable the capture of a fixed number of thumbnails per clip. The fixed number is identified in the Thumbnail Number field. You may use any number except zero. The spacing between thumbnails depends on the length of the video clip, and will be approximately $(\text{Clip Length})/(\text{Number of Thumbnails})$.
Thumbnail Number	<p>When the Use Thumbnail Number box is checked, the number in this field determines the number of thumbnails to be generated during the video clip. The thumbnails are equally spaced across the clip (except for irregularities caused by rounding to the nearest video frame). This may not represent the total number of thumbnails captured if other checkboxes enable other methods of requesting thumbnails. The number must be greater than zero.</p> <p>To figure out which frames are captured: Divide the length of the video by the number of thumbnails, and multiply by the frame rate. The thumbnail image will be taken at the center of the interval rounded down to the nearest frame.</p> <p>Example: 5 thumbnails taken from a 60 second video @ 30 fps will result in thumbnails taken at 6 seconds (frame 180), 18 seconds (frame 540), 30 seconds (frame 900), 42 seconds (frame 1260), and 54 seconds (frame 1620).</p>
Generate Single Thumbnail	Check this box to enable the capture of a single thumbnail image at the time specified in the Thumbnail Time box on the File Job Submission page. These submission parameters are intended to be set on a per-submission basis, and are not saved in the profiles. See also: File Job, page 2-2 .

Thumbnail Properties (Thumbnail Profile)

Figure 7-6 shows Thumbnail Properties settings. Table 7-6 describes the settings.

Figure 7-6 Thumbnail Profile: Thumbnail Properties Settings

Table 7-6 Thumbnail Profile: Thumbnail Properties Settings and Descriptions

Setting	Description
Image Format	Choose a graphic format for the thumbnail images from the drop-down list. Supported formats are: JPEG, PNG, BMP, TGA, TIFF
Width / Height	<p>These boxes determine the size of the thumbnail images. The first box specifies the thumbnail width, and the second box specifies the thumbnail height. By default, the setting is 320x240. The entire image from the video is resized to fit the set thumbnail dimensions. The images are taken after preprocessing, so any cropping or color corrections applied in the preprocessor will be evident in the thumbnails.</p> <p>The images may be stretched or compressed horizontally to fit the requested thumbnail dimensions. There is no cropping to make the thumbnails. The graphics formats of the thumbnails assume square pixels, whereas video may not. So, for example, an NTSC video sized 720x480 output with a pixel aspect ratio of 0.9 should be considered a 4:3 image aspect ratio, resulting in a thumbnail with dimensions 160x120.</p> <p>Thumbnails have a minimum size of 80x60 pixels.</p>
Quality	<p>Sets the image quality for JPEG thumbnails only.</p> <p>This field allows four quality settings, labeled 1,2,3,4. The higher numbers correspond to higher image quality and require larger file sizes for the thumbnails.</p>

Adding a Thumbnail Profile to a Job Profile

Procedure

- Step 1** From the **Toolbox**, click **Profile Management > New Profile** or **Open Profile**.
- Step 2** From the **Profile Class** drop-down, select **Job**, and click the **New Profile** or **Open Profile** button.
- Step 3** Expand the **Encoding** section, and scroll down to the **Thumbnail** box.

- Step 4** Highlight one or more individual Thumbnail Profiles. As they are selected, the Thumbnail Profiles are added to the Job Profile in the upper pane.
- Step 5** Click **Save**.
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