Logo Insertion and Subtitle Burn-in

This chapter covers the logo insertion, banner insertion, EAS (Emergency Alert System) alert insertion, and subtitle burn-in capabilities of the Digital Content Manager (DCM).

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Introduction

The DCM is able to burn-in subtitles in the encoded video stream of services. Subtitles can be conveyed in different forms, teletext base subtitles, bit-map based subtitles, and so on. A DCM with an MFP card supports bit-map based subtitles as specified by the DVB (Digital Video Broadcasting) subtitling specification. To configure subtitle burn-in for a video stream, see Using the Subtitle Burn-In Feature, on page 36.

The DCM logo inserter allows you to insert static logos, animated logos, and messages in the video stream of a service. A message is inserted in a video stream using a banner whether or not accompanied by one or multiple logos (up to four logos / banner). Inserting logos (without banner) in services uses the logo insertion feature and inserting banners uses the banner insertion feature.

The logo inserter can also be used for the Emergency Alert System (EAS). When the EAS is activated for a certain emergency reason (tornado, earthquake, and so on), an EAS alert message is inserted in the video stream of the services for which EAS is enabled. For more information about the setup of this system, see Using the EAS Alert Insertion Feature, on page 30.

The logo insertion, banner insertion, and EAS alert insertion processes are done by a Transcoder Card that is calibrated to a logo inserter or by an MFP. To change the Transcoder Card calibration, see Changing the Transcoder Card Calibration.
A Transcoder and MFP card have no inputs and no outputs and presenting the video stream must be done by routing the corresponding incoming service from the card input through the Transcoder or MFP card to the output of a card. A Transcoder Card is able to process four video services and maximum four logos and one banner can be inserted in one video stream at the same time. An MFP card is able to insert maximum three static logos or one banner together with one static logo in a processed video stream at the same time. An MFP card does not support animated logos.

Important

• Banner insertion and subtitle burn-in by an MFP card is not possible if its MFP Mode is set to Premium Picture Quality Transcode or Encode.

• For logo insertion using an MFP card, the resource setup of the engine must be set to 6 SD Video, 2 HD Video, 1 Premium PQ HD Video, or 2 Premium PQ SD Video. If the resource setup of an MFP engine is set to 2 HD Video, logo insertion can only be done in one HD (high definition) video service. Then, the second slot can no longer be used.

• Inserting logos using a Transcoder Cards needs a card with TC CO-P DSP revision V03.00.00 or later. The hardware revision numbers can be found on the Version Info page of the DCM GUI (graphical user interface). See Checking the Version Information.

• A Transcoder Card supports the insertion of static logos, animated logos, and messages in SD video streams (frame coded only) or HD video streams (frame coded only) with video format 720p (max 60 Hz).

• To achieve a compliant video stream after inserting a logo, banner, or EAS alert, the bit rate of the video stream must be controlled by adding the corresponding service in a rate control group and setting the rate control mode to Rate Limited or Stat Muxed. For more information about rate control, see Rate Control.

Licensing

The logo insertion and the subtitle burn-in features are licensed. See Logo Insertion and Subtitle Burn-In Licensing.

Using the Logo Insertion Overview Page of a Transcoder Card

For each Transcoder Card that is calibrated to a logo inserter, the DCM GUI provides a Logo Insertion Overview page with a Logo Inserter Overview table. This table is populated with all the services that are passed from the input to the output through the logo inserter.

The following table describes the icons in the Service Overview table.
<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✅</td>
<td>The logo of the corresponding logo assignment is inserted in the video stream of the service (logo insertion feature). A banner is inserted in the video (banner insertion feature).</td>
</tr>
<tr>
<td>✗</td>
<td>The logo of the corresponding logo assignment is not inserted in the video stream of the service (logo insertion feature). Banner insertion is allowed but there is no banner inserted in the video (banner insertion feature).</td>
</tr>
<tr>
<td>⚪</td>
<td>The service has no logo assignments (logo insertion feature). Banner insertion is not allowed (banner insertion feature).</td>
</tr>
</tbody>
</table>

An active EAS alert insertion is indicated by **EAS** in the banners column of the corresponding services (services for which EAS alert insertion is allowed).

Next to this **Service Overview** table, the logo inserter overview page also provides a settings overview table for each individual service. Such a table provides an overview of the following information:

- The logo assignments made to a service (using the logo insertion feature).
- The status of the logo insertion, active if the logo is inserted in the video stream or hidden otherwise.
- An indication if banner insertion is allowed or not.
- An indication if EAS alert insertion is allowed or not.
- The status of the banner insertion (active or no active). If banner insertion is active, the name of the banner is shown. When an EAS alert insertion is active, (EAS) is shown next to active.

The following illustration shows a settings overview table.

### Opening the Logo Insertion Overview Page

**Procedure**

1. **Step 1** In the DCM GUI, choose **Service > Tree View** from the main menu. The **Tree View** page appears.
2. **Step 2** In the **Processing** tree, double-click the logo inserter branch for which the overview page must be displayed. The **Logo Inserter Service** page appears.
3. **Step 3** Click **Overview**.
The Logo Inserter Overview page appears.

Using the Navigating Possibilities of the Logo Insertion Overview Page

The Service Overview table and the logo insertion settings overview tables are provided with several links. The following list describes these links.

- Links in the Service Overview table:
  - Click the SID (service identifier) value or the arrow down icon to highlight the logo insertion settings overview table of the corresponding service.
  - Click the icon in the Logo field of a service to open the Logo Inserter Service tab with the Logo Insertion table, the Banner Insertion settings, and the Manual Banner Insertion settings. For more information about this table, see Logo Assignment, on page 20.

- Links in the logo insertion settings overview table of a service:
  - Click the logo or the banner information to open the Logo Inserter Service tab with the Logo Insertion table, the Banner Insertion settings, and the Manual Banner Insertion settings. For more information about this table, see Logo Assignment, on page 20.
  - Click the icon at the right side of the table header to display the Service Overview table.

Using Libraries

Logo Library

Before a logo can be inserted in the video component of a service, the logo must be uploaded to the logo library of the DCM. Instead of uploading a logo, a URL (uniform resource locator) can be specified (remote logo). When the remote logo is activated for logo insertion, the device downloads the logo from the configured location.
Note

• Maximum 128 logo configurations (static and animated logos) can be uploaded to the DCM.

• For remote logos, DCM only supports IPv4 (Internet Protocol version 4) and IPv6 (Internet Protocol version 6) address based HTTP URLs (without DNS [Domain Name System] lookup).
  
  • The format for an IPv4 address must be:
    http://<IP>/<Location on remote HTTP server>/<file name>
  
  Or
  http://<IP>:<port number>/<Location on remote HTTP server>/<file name>
  
  For example:
  http://192.0.2.0:28550/LogoArchive/PNG/default_logo.png
  
  • The format for an IPv6 address is similar but the IP address must be enclosed in square brackets.
  
  For example:
  http://[2001:db8:0:1]:28550/LogoArchive/PNG/default_logo.png
  
• Limits can be configured to the maximum size of the logos. When a logo is uploaded to the logo library of the device and the size of the logo exceeds these limits, an Operation Not Succeeded failure is displayed and the corresponding logo is not added to the library. When a remote logo is downloaded at the moment a logo insertion is activated and the size of the logo exceeds the limits, the logo insertion action is aborted and an alarm is generated.

• If a remote logo cannot be downloaded when it must be inserted, or when the remote logo is defined as static logo and the downloaded logo is an animated logo, or when the logo is corrupt or not supported by the DCM, the logo insertion action is not executed and an alarm is generated.

• The logo insertion action is executed if a remote logo is defined as animated logo and the downloaded logo is a static logo.

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**Supported Logos**

**Static Logos:**

• File format: portable network graphic (PNG) and targa (TGA).

• Logo size: maximum 57600 pixels.

  For logos that must be inserted by an MFP, the maximum resolution for video streams on an SD slot is 192 x 128 pixels and for video streams on an HD slot is 480 x 270 pixels.

• Monochrome, grayscale, grayscale with opacity, indexed color (palette), indexed color (palette) with opacity, Truecolor, or Truecolor with opacity image.

  PNG format limitations:
  
  • Only 24-bit RGB and 32-bit RGBA.
  
  • No gamma information.

  TGA format limitations:
• Truevision TGA.
• Truecolor 24 bit/pixel, black/white 8 bit per pixel, indexed depth 8 bit per channel.
• No gamma support.
• Optional alpha channel RGB24+A (alpha is within the same file as rgb and 8 bit per alpha pixel).
• No origin x-y support.

Animated Logos

• File format: multi-image network graphic (MNG) animations, 24-bit RGB and 32-bit RGBA MNG without gamma information.
• Monochrome, grayscale, grayscale with opacity, indexed color (palette), indexed color (palette) with opacity, Truecolor, or Truecolor with opacity images.
• Frame size: maximum 57600 pixels.
  For logos that must be inserted by an MFP, the maximum resolution for SD (standard definition) video is 192 x 128 pixels and for HD (high definition) video is 480 x 270 pixels.
• Number of frames: minimum 1 and maximum 250 frames.
• All frame must be able to be composed to similar scaled images (coalesce).

MNG format limitations:

• All frames in the animation must have the same size.
• All frames in the animation must have offset 0,0 in relation to the page.
• All frames in the animation must have positive x,y axis.
• All frames in the MNG animation must have the same frame delay. Frame delay cannot be 0.
• All channel depths (r,g,b,a) of the frames must be smaller than or equal to 8 bits.
• Unsupported MNG chunks (http://www.libpng.org/pub/mng/spec/index.html):
  * BASI chunks
  * Delta-PNG chunks
  * SHOW chunks

Uploading Logos

Procedure

**Step 1** In the DCM GUI, choose **Configuration > Media** from the main menu.
The logo page appears.

**Step 2** Refer to the Add logo area.

**Step 3** In the Name field, enter a unique name for the logo.

**Step 4** In the X Position (px) field, enter the number of pixels between the top of the logo and the top of the video frame. For a logo that must be inserted by a Transcoder Card, that number must be even.

**Step 5** In the Y Position (px) field, enter the number of pixels between the left edge of the logo and the left edge of the video frame. For a logo that must be inserted by a Transcoder Card, that number must be even.

**Step 6** In the Opacity (%) field, enter the amount of opacity that the logo must have. This parameter can be changed in steps of 0.5 percent. 100 percent means that the logo is not transparent.

**Step 7** In the Fade In (frames) field, enter the number of frames in which the logo must fade in. A value can be entered between 0 and 300 frames.

**Step 8** In the Fade Out (frames) field, enter the number of frames in which the logo must fade out. A value can be entered between 0 and 300 frames.

**Step 9** Check the Show by default check box if the logo must be directly inserted in the video stream after assigning, or uncheck this check box otherwise.

**Step 10** For an animated logo, complete the following steps:
   a) Check the Animated check box.
   b) From the Playout Mode drop-down list, choose one of the following values:
      - **Normal**—The animated logo is played in forward direction.
      - **Palindrome**—The animated logo is played successively in forward direction and then in reverse direction.
   c) From the Loop Count drop-down list, choose the desired value:
      - **Specific**—The animated logo is played a specific number of times. The number of times that the logo must be played, must be entered in the field next to the Loop Count drop-down list. A loop count equal to 0 means that the animated logo is played continuously.
      - **Continuously**—The animated logo is played continuously.

**Step 11** For a logo that must be uploaded, click Browse and browse to the corresponding logo. The path and filename of the logo is shown in the Logo field.

**Step 12** For a remote logo, check the Remote Logo check box and enter the URL in the box next to this check box.

**Step 13** Click Add.
The logo is added to the Logo Settings table.

**Step 14** Repeat the 2 to 13 for all logos to be uploaded.
Changing Logo Settings

**Procedure**

**Step 1** In the DCM GUI, choose **Configuration > Media** from the main menu. The **Logo** page appears.

**Step 2** In the **Actions** column of the **Logo Settings** table, click the icon in the row of the logo for which settings must be changed. The **Logo Configuration** dialog box appears.

**Step 3** In the **Name** field, enter a unique name for the logo.

**Step 4** In the **X Position (px)** field, enter the number of pixels between the top of the logo and the top of the video frame. For a logo that must be inserted by a Transcoder Card, that number must be even.

**Step 5** In the **Y Position (px)** field, enter the number of pixels between the left edge of the logo and the left edge of the video frame. For a logo that must be inserted by a Transcoder Card, that number must be even.

**Step 6** In the **Opacity (%)** field, enter the amount of opacity that the logo must have. This parameter can be changed in steps of 0.5 percent. 100 percent means that the logo is not transparent.

**Step 7** In the **Fade In (frames)** field, enter the number of frames in which the logo must fade in. A value can be entered between 0 and 300 frames.

**Step 8** In the **Fade Out (frames)** field, enter the number of frames in which the logo must fade out. A value can be entered between 0 and 300 frames.

**Step 9** Check the **Show by default** check box if the logo must be directly inserted in the video stream after assigning, or uncheck this check box otherwise.

**Step 10** From the **Playout Mode** drop-down list (only available for an animated logo), choose one of the following values:

- **Normal**—The animated logo is played in forward direction.
- **Palindrome**—The animated logo is played successively in forward direction and then in reverse direction.

**Step 11** From the **Loop Count** drop-down list (only available for an animated logo), choose the desired value:

- **Specific**—The animated logo is played a specific number of times. The number of times that the logo must be played, must be entered in the field next to the Loop Count drop-down list. A loop count equal to 0 means that the animated logo is played continuously.
- **Continuously**—The animated logo is played continuously.

**Step 12** Click **OK** and then click **Apply**.

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Downloading Logos from the Logo Library to Your PC

**Procedure**

**Step 1** In the DCM GUI, choose **Configuration > Media** from the main menu.
The Logo page appears.

### Logo Settings

<table>
<thead>
<tr>
<th>Name</th>
<th>Position (X,Y)</th>
<th>Opacity</th>
<th>Fade In</th>
<th>Fade Out</th>
<th>Default</th>
<th>Type</th>
<th>URL</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>NED1</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NED2</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NED3</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAI1</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAI2</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAI3</td>
<td>10,10</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>Show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>opaque sample logo</td>
<td>14,14</td>
<td>100%</td>
<td>30</td>
<td>30</td>
<td>Don't show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
<tr>
<td>transparent sample logo</td>
<td>129,14</td>
<td>100%</td>
<td>30</td>
<td>30</td>
<td>Don't show</td>
<td>Static</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step 2** In the **Actions** column of the **Logo Settings** table, click ⌫ in the row of logo that must be downloaded.

**Step 3** Save the logo to your local disk.

Downloading a remote logo is done in multiple steps.

- The logo is uploaded to the device from the configured location.
- The DCM converts the DCM logo to a particular format (DCM format) useful to be inserted in video streams, the original logo is removed.
- The logo is converted from the DCM format to PNG (static logo) or to MNG (animated logo).
- The logo is downloaded to the desired location on your PC.

### Removing Logos

**Procedure**

**Step 1** In the DCM GUI, choose **Configuration > Media** from the main menu.

The Logo page appears.

**Step 2** In the **Actions** column of the **Logo Settings** table, click ✗ in the row of each logo that must be removed.

After clicking ✗ and the **Delete Confirmation on Single Click Delete** option is enabled, a confirmation box is displayed. Click **OK** to confirm.

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**Important**

A logo, which is assigned to a service or banner, cannot be removed from the logo library. For more information about assigning logos, see Using the Logo Insertion Feature, on page 19, Using the Banner Insertion Feature of an MFP Card, on page 28 or Using the Banner Insertion Feature of a Transcoder Card, on page 25.
Defining the Maximum Logo Size

Procedure

Step 1 In the DCM GUI, choose Configuration > Media from the main menu. The Logo tab appears.

Step 2 Refer to the Max Logo Size area.

Step 3 From the Max Height (px) drop-down list, choose Specify to define a maximum height for the logos or choose No Limit otherwise.

Step 4 In the field beside the Max Height (px) drop-down list, enter the maximum height in pixels for the logos. This field is dimmed if the Max Height (px) parameter is set to No Limit.

Step 5 From the Max Width (px) drop-down list, choose Specify to define a maximum width for the logos or choose No Limit otherwise.

Step 6 In the field beside the Max Width (px) drop-down list, enter the maximum width in pixels for the logos. This field is dimmed if the Max Width (px) parameter is set to No Limit.

Step 7 Click Apply.

Font Library

The font library is provided with several preloaded fonts that can be used to insert text in video streams. These preloaded fonts are:

- Bitstream Vera
  - Sans: normal, oblique, bold, bold + oblique
  - Sans Mono: normal, oblique, bold, bold + oblique
  - Serif: normal, bold

- Luxi
  - Sans: normal, oblique, bold, bold + oblique
  - Mono Serif: normal, oblique, bold, bold + oblique
  - Serif: normal, oblique, bold, bold + oblique

- Sacco-Vanzetti
  - Normal, oblique, bold, bold + oblique

The preloaded fonts support ascii-8, including the latin characters. When other fonts are required to insert text in video streams, these fonts can be uploaded in the font library.
Note

- The DCM only supports true type fonts (TTF).
- Maximum 128 true type fonts can be uploaded to the font library of the DCM.

## Uploading Fonts

### Procedure

**Step 1** In the DCM GUI, choose Configuration > Media from the main menu and then click the Fonts tab.

**Step 2** Refer to the Add Font area.

**Step 3** In the Name field, enter a name for the font.

**Step 4** Click Browse, browse to the corresponding font, and select it. The path and filename of the font is shown in the Font field.

**Step 5** Click Add Font.
The font is added to the font library and appears in the Font table.

## Removing Fonts

### Procedure

**Step 1** In the DCM GUI, choose Configuration > Media from the main menu and then click the Fonts tab.

**Step 2** In the Fonts table, click × in the row of the font that must be removed.
After clicking ✗ and the **Delete Confirmation on Single Click Delete** option is enabled, a confirmation box will be displayed. Click **OK** to confirm.

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**Note**

- A font, which is used by a banner, cannot be removed from the font library.
- A preloaded font can be removed from the font library but will be uploaded again after a cold or factory restart of the DCM.

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**Banner Library**

Text messages are inserted in video streams using banners. The position, size, color, and opacity of the banner and the font, opacity, size, loop count, and speed of the text, which must be inserted in the banner, are configurable. The text, that must be inserted in the banner, must be entered during the banner insertion process (see **Using the Logo Insertion Feature**, on page 19), or the default text message of the banner can be used. At activation, the text scrolls over the banner from the right to left or from the right to the left; even if the text is short enough to fit inside the banner.

The banner library is provided with a sample banner with following default specifications:

- No logo configurations
- Text color: white and 100% opaque
- Banner color: black and 50% opaque
- Font: Luxi sans serif, normal
- Loop count is 10
- Fade in and out are 0, instantaneous
- Banner position: 160 x 648
- Banner and text size: 960 x 45
- Text speed: 6 pixels/frame (360px/second on a 60 Hz video)

To modify the sample banner, see **Changing the Banner Settings**, on page 15. Removing the sample banner is not possible.

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**Note**

- Maximum 256 banner combinations can be added to the DCM.
- After performing a cold or factory restart of the DCM, the sample banner gets its default specifications.
Adding Banners

Procedure

Step 1 In the DCM GUI, choose **Configuration > Media** from the main menu and then click the **Banner** tab.

Step 2 Click **Add Banner**.
A dialog box appears.

Step 3 Refer to the **Banner** area.

Step 4 In the **Name** field, enter a name for the banner.

Step 5 In the **X-Y Position (px)** fields, enter respectively the number of pixels between the top of the banner and the top of the video frame and the number of pixels between the left edge of the banner and the left edge of the video frame. The X position can be set between 0 and 1919 and the Y position between 0 and 1079. For banner insertion using a Transcoder Card, these numbers must be even.
The scrolling text is automatically centered inside the banner.

Step 6 In the **Color (#RGB)** fields, enter the RGB values of the desired banner color. The first field indicates the brightness of red, the second green, and the third blue. RGB values can be entered between 0 and 255.

Step 7 In the **Opacity (%)** field, enter the amount of opacity that the banner must have. This parameter can be changed in steps of 0.5%. 100% means that the banner is not transparent.

Step 8 In the **Height, Width (px)** fields, enter respectively the height (maximum 144) and the width (maximum 1920) of the banner (expressed in pixels).

- For banner insertion using a Transcoder Card, the maximum height of the banner is 60 pixels and the maximum width is 960 pixels.
- For banner insertion in an SD video stream using an MFP, the maximum height of the banner is 64 pixels and the maximum width is 720 pixels. The minimum height of the banner is eight pixels.

Step 9 Refer to the **Text** area.

Step 10 From the **Font** drop-down list, choose the desired font for the text that must be displayed in the banner.

Step 11 In the **Color (#RGB)** fields, enter the RGB values of the desired color of the text. The first field indicates the brightness of red, the second green and the third blue. RGB values can be entered between 0 and 255.

Step 12 In the **Opacity (%)** field, enter the amount of opacity the text must have. This parameter can be changed in steps of 0.5 percent. 100 percent means that the banner is not transparent.

Step 13 In the **Height, Width (px)** fields, enter respectively the height (maximum 60) and the width (maximum 960) of the text (expressed in pixels).

- For banner insertion using a Transcoder Card, the maximum height of the text is 60 pixels and the maximum width is 960 pixels.
- For banner insertion using an MFP.
  - For an SD video stream, the maximum height of the text is 40 pixels and the maximum width is 720 pixels.
  - For an HD video stream (HD720), the maximum height of the text is 60 pixels and the maximum width is 1280 pixels.
For an HD video stream (HD1080), the maximum height of the text is 90 pixels and the maximum width is 1920 pixels.

The height and width of the text cannot exceed the height and width of the banner.

Step 14 From the Loop Count drop-down list, choose Continuously or Specify.

Step 15 In the Loop Count field, enter the number of times the text must scroll over the banner. A loop count equal to 0 means that the animated logo is played continuously. This box is dimmed if Continuously is chosen from the Loop Count drop-down list.

Step 16 From the Speed (px/frames) drop-down list, choose the scroll direction for the text: Right to Left (default) or Left to Right.

Step 17 In the Speed (px/frames) field, enter the text speed, expressed in px per frame. A value can be entered between 1 and 20.

Step 18 In the Message field, enter the default text message for this banner. The maximum number of characters that can be inserted using a Transcoder Card is 4096 if the text height is smaller than or equal to 46 pixels. The maximum number of characters that can be inserted using an MFP card is 1500.

Step 19 Refer to the Fade area.

Step 20 In the In (frames) field, enter the number of frames in which the banner must fade in. A value can be entered between 0 and 300 frames.

Step 21 In the Out (frames) field, enter the number of frames in which the banner must fade out. A value can be entered between 0 and 300 frames.

Step 22 From the Logo drop-down lists in the Logo area, choose the desired logos. Up to four logos can be shown in a banner for a video stream that is processed by a Transcoder Card and one logo can be shown in a banner for a video stream that is processed by an MFP.

Step 23 From the Banner Stops drop-down list in the Behavior area, choose one of the following values:

- **Immediately**—The banner insertion is immediately stopped if the time, as specified in the Duration (s) parameter (manual banner insertion) or as specified in the EAS message received from an EAS system, is reached. Even if the running text loop is not yet completed.

- **After current loop**—The banner insertion is stopped if the time, as specified in the Duration (s) parameter (manual banner insertion) or as specified in the EAS message received from an EAS system, is reached and after completing the running text loop.

**Hint:** You can validate the configured banner by choosing the card/density combination from the Validate For drop-down list and clicking Validate. Information is displayed at the top of the dialog box.

Step 24 Click OK.

The new banner is added to the Banners table.

The Banners table represents for which card/density combinations the configured logo can be used.
Important
The values to specify the position and the size of a banner are absolute values. If a banner is created for an HD service (for instance, at the bottom of the screen) and the banner is used for SD services, then it may well be possible that the banner is not inserted or only partially inserted in the SD service.

Changing the Banner Settings

Procedure

Step 1
In the DCM GUI, choose Configuration > Media from the main menu and then click the Banner tab.

Step 2
In the Banners table, click in the row of the banner for which settings must be changed.

Result: The settings dialog box of the selected banner appears.

Step 3
In the settings dialog box, modify the settings as described in Adding Banners, on page 13 and click OK.

Removing Banners

Procedure

Step 1
In the DCM GUI, choose Configuration > Media from the main menu and then click the Banner tab.

Step 2
In the Banners table, click in the row of each banner that must be removed.

After clicking and the Delete Confirmation on Single Click Delete option is enabled, a confirmation box will be displayed. Click OK to confirm.
Routing a Service to the Output Through the Transcoder or MFP Card

For inserting a logo, banner, or EAS alert in a video service, the service must be passed from the input to the output through the Transcoder or MFP card. The following topics describe how to pass a service from the input to the Transcoder and to the output. Next to these topics, the procedures are described to merge particular components from a service, which is processed by a logo inserter, in an outgoing service.

For logo insertion using an MFP Card, the incoming service must be routed to the output through an engine of a MFP card and processing must be enabled (Transcode or Encode). See Transcoding Using the MFP Card or Baseband Video Encoding.

Passing an Incoming Service to the Logo Inserter

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Inputs tree, browse to the service that must be passed to the Transcoder Card.

Step 3 Drag and drop the branch of this incoming service to the branch of the Transcoder Card in the Processing tree.
Passing a Service from the Logo Inserter to the Output

Procedure

Step 1  In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2  In the Outputs tree, browse to the outgoing TS in which the service must be passed.

Step 3  In the Processing tree, browse to the service that must be passed to the output.

Step 4  Drag and drop the branch of the service to the branch of this outgoing TS.

Merging Components from the Logo Inserter in an Outgoing Service

Particular components of a service, which is processed by a logo inserter, can be merged in an outgoing service.

Note

All components of a service that is processed by a logo inserter have the same processing delay. When, for instance, audio components from a processed service are merged in an outgoing service that is not delayed by a particular process, the audio is not in sync.

Merging components of a service, which are processed by a logo inserter, can be done in two different ways: using the drag-and-drop method or by creating component merge rules.

Passing Components from the Logo Inserter to an Outgoing Service by Using the Drag-and-Drop Method

Procedure

Step 1  In the DCM GUI, choose Service > Tree View from the main menu.
Merging Components from the Logo Inserter in an Outgoing Service

The Tree View page appears.

**Step 2** In the Outputs tree, browse to the outgoing service in which the component must be merged.

**Step 3** In the Processing tree, browse to the component that must be merged in the outgoing service.

**Step 4** Drag and drop the branch of the component to the branch of this outgoing service.

---

Passing Components from the Logo Inserter to an Outgoing Service by Adding Component Merge Rules

**Procedure**

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Outputs tree, double-click the TS with the outgoing service in which components of a service must be merged. The Output TS page appears.

**Step 3** Click Service and then click the Routing tab. The Output Service Routing page appears.

**Step 4** In the Service Routing table, click the Merged arrow of the corresponding outgoing service. The Component Merge Rule table and Add New Merged Service or Merged Service Component area appear.

**Step 5** In the Add New Merged Service or Merged Service Component area, click .
The Select Merged Service dialog box appears.

**Step 6** In this dialog box, specify the processed service from which components must be merged and click **OK**.

**Step 7** Check the **Select Component Merge Rule** check box.

**Step 8** From the **Track Type** drop-down list, choose the component merge rule type.

**Step 9** For a tag component merge rule type, enter the tag of the component in the **Component Tag** field.

**Step 10** For a stream type component merge rule type, choose the stream type of the component from the **Stream Type** drop-down list.

- When an audio stream type is chosen, enter the 3-character language code (as specified by ISO 639-2 [15]) in the **Language** field.
- For **Stream Type = User Defined**, enter the value of the stream type in the **Stream Type Value** field.

**Step 11** For an ECM PID (entitlement control message packet identifier) or ES PID (elementary stream PID) component merge rule type, enter the PID value in the **Input PID** field.

**Step 12** Click **Add**.

The component merge rule is added to the **Component Merge Rule** table.

**Step 13** Click **Apply**.

---

**Using the Logo Insertion Feature**

Before a logo can be inserted in the video stream of a service using the logo insertion feature, a logo assignment must be created for this service. The DCM allows you to assign multiple logos from the logo library to the video stream of a service.

Restrictions for services processed by an MFP:

- Maximum three logos can be inserted in one video stream at the same time. When you try to insert more logos in a video stream at the same time, the logo inserted using the banner insertion or the EAS alert insertion feature has higher priority than the logos inserted using the logo insertion feature.
- The logo must have a rectangle format, a nonrectangle logo must be created using an alpha channel with 100-percent transparent pixels.
- Logo insertion cannot be combined with splicing or ABR.

Restrictions for services processed by a Transcoder Card:

- Maximum four logos can be inserted in the video stream at the same time. When you try to insert more logos in a video stream at the same time, the logos inserted using the banner insertion or the EAS alert insertion feature have higher priority than logos inserted using the logo insertion feature.
- The combined frame count of the animated logos cannot exceed 250 frames.
- The total area used by an inserted banner and inserted logos cannot be higher than 25 percent of the resolution of a 720 pixel frame. When this total area exceeds 25 percent of the video resolution, the last logos are not inserted.
If logos are inserted in a video stream and a banner/EAS insertion is activated, the logos are temporarily removed. Once the banner insertion is finished, the logos are resumed. A Transcoder Card removes a minimal amount of the logo, enough to free up the resource for the banner to be displayed. An MFP removes all logos regardless how much resources the banner needs.

Note
When a banner overlaps other logos, the order from back to front is: video, banner, text, and logos.

Logo Assignment

Assigning Logos to a Service Processed by a Transcoder Card

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Processing tree, double-click the Transcoder Card branch with the service to which the logo must be assigned to. The Logo Inserter Overview page appears.

Step 3 In the Service Overview table, click a logo icon of the corresponding service. The Logo Inserter Service page appears.

Step 4 From the Logo drop-down list in the Add Logo area, select the logo that must be assigned to the corresponding service and click Add Row. A logo assignment is added to the Logo Insertion table.

Step 5 Repeat the last step for all logos that must be assigned to the service.

Step 6 Click Apply. The logo settings are displayed in the Current Configuration field.

Important: If the Show by default parameter of the logo is enabled, the logo will be directly inserted after assignment.
Assigning Logos to a Service Processed by an MFP Card

**Procedure**

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, right-click the service to which the logo must be assigned and choose Video. The MFP Video page appears.

**Step 3** Click the Media tab.

**Step 4** In the Video Media Settings table, click the Edit arrow in the row of this service. The MFP Media page appears.

**Step 5** Refer to the Add Logo area.

**Step 6** From the Logo drop-down list, choose the logo.

**Step 7** From the Show/Hide After Reboot drop-down list, choose one of the following values:

- Follow Logo Library—After rebooting the device, the logos, for which the Show by default parameter is enabled, are inserted. See Uploading Logos, on page 6.
- Keep Current State—After rebooting the device, the state just before the reboot action is restored.

**Step 8** Click Add. The logo assignment is created and shown in the MFP Logo Insertion table.

Removing Logo Assignments from a Service Processed by a Transcoder Card

**Procedure**

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, double-click the Transcoder Card branch with the service for which the logo assignments must be removed. The Logo Inserter Service page appears.

**Step 3** Click Overview. The Logo Inserter Overview page appears.

**Step 4** In the Service Overview table, click a logo icon of this service. The Logo Inserter Service page appears.

**Step 5** In the Logo Insertion table, click X in the row of each logo assignment that must be removed.
Removing Logo Assignments from a Service Processed by an MFP Card

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Processing tree, right-click the service for which the logo assignments must be removed and choose Video. The MFP Video page appears.

Step 3 Click the Media tab.

Step 4 In the Video Media Settings table, click the Edit arrow in the row of this service. The MFP Media page appears.

Step 5 In the MFP Logo Insertion table, select the row of each assignment that must be removed and click Delete Selected items.

Result: The selected assignments are removed.
Starting and Stopping Logo Insertion

Starting Logo Insertion for a Service Processed by a Transcoder Card

Procedure

Step 1
In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2
In the Processing tree, double-click the logo inserter branch with the service for which the logo insertion must be started. The Logo Inserter Service page appears.

Step 3
Click Overview. The Logo Inserter Overview page appears.

Step 4
In the Service Overview table, click a logo icon of this service. The Logo Inserter Service page appears.

Step 5
In the Logo Insertion table, click ➤ in the row of the logo assignment that must be started.

Result: The logo insertion process is started.

Starting Logo Insertion for a Service Processed by an MFP Card

Procedure

Step 1
In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2
In the Processing tree, right-click the service for which logos must be inserted in the video stream and choose Video. The MFP Video page appears.

Step 3
Click the Media tab.

Step 4
In the Video Media Settings table, click ➤ in the row of the logo assignment that must be started.
Starting and Stopping Logo Insertion

Tip

Activating logo insertion of a service, which is dropped to the MFP branch for preconfiguration purposes, is possible. Logo insertion is started immediately if the service is dropped to an engine slot of the card. In the row of a service that is dropped to the card branch, the icons used to start and to stop logo insertion are gray colored.

Stopping Logo Insertion for a Service Processed by a Transcoder Card

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Processing tree, double-click the logo inserter branch with the service for which the logo insertion must be stopped. The Logo Inserter Service page appears.

Step 3 Click Overview. The Logo Inserter Overview page appears.

Step 4 In the Service Overview table, click a logo icon of this service. The Logo Inserter Service page appears.

Step 5 In the Logo Insertion table, click in the row of the logo assignment that must be stopped.

Result: The logo insertion process is stopped.
Stopping Logo Insertion for a Service Processed by an MFP Card

**Procedure**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>In the DCM GUI, choose Service &gt; Tree View from the main menu. The Tree View page appears.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>In the Processing tree, right-click the service for which the logo insertion must be stopped and choose Video. The The MFP Video page appears. page appears.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Click the Media tab.</td>
</tr>
<tr>
<td>Step 4</td>
<td>In the Video Media Settings table, click in the row of the logo insertion that must be stopped.</td>
</tr>
</tbody>
</table>

**Result:** The logo insertion process is stopped.

Using the Banner Insertion Feature of a Transcoder Card

The banner insertion feature using a Transcoder Card allows you to insert a banner with text message accompanied with maximum four logos. Before a banner with text message can be inserted in a video stream, the banner with appropriate logos must be added to the banner library. To add banners to the banner library, see Adding Banners, on page 13.

**Caution**

When a banner is inserted in the video stream of a service while an EAS alert is inserted, the EAS alert is removed from the stream and conversely.

**Restrictions**

- Only one banner can be inserted in the video stream of a service at the same time.
- The number of logos that can be inserted in a video stream at the same time is limited to four. When you try to insert more logos in a video stream at the same time, the logos inserted using the banner insertion feature have higher priority than logos inserted using the logo insertion feature.
- The total area used by an inserted banner and inserted logos cannot be higher than 25 percent of the resolution of a 720 pixel frame. When this total area exceeds 25 percent of the video resolution, the last logos are not inserted.
When a banner overlaps other logos, the order from back to front is: video, banner, logos, and text. The ordering of the logos is nondeterministic.

### Configuring the Banner Insertion Settings

**Procedure**

**Step 1** In the DCM GUI, choose **Service > Tree View** from the main menu. The **Tree View** page appears.

**Step 2** In the **Processing** tree, double-click the logo inserter branch with the service for which banner insertion settings must be configured. The **Logo Inserter Service** page appears.

**Step 3** Click **Overview**. The **Logo Inserter Overview** page appears.

**Step 4** In the **Service Overview** table, click a logo icon of this service. The **Logo Inserter Service** page appears.

**Step 5** Refer to the **Banner Insertion** area.

**Step 6** From the **Allowed Banner** drop-down list, choose one of the following values:

- **None**—Banner insertion is not allowed.
- **Text only**—Banner insertion with only text messages is allowed (no logos).
- **Static Logos**—Banner insertion with text messages and static logos is allowed (no animated logos).
- **Static and Animated Logos**—Banner insertion with text messages, static and animated logos is allowed.

**Step 7** From the **Screen logos** drop-down list, choose one of the following values:

- **Hide**—The logos inserted using the logo insertion feature are interrupted during text message/banner insertion.
- **Don't Hide**—The logos inserted using the logo insertion feature remains inserted during text message/banner insertion. Remark that only four logos can be inserted in the video stream of a service at the same time. When the number of logos exceeds this maximum, the logos inserted using the logo insertion feature are interrupted.

**Step 8** From the **EAS Alerts** drop-down list, choose **Allow** to allow inserting EAS (Emergency Alert System) alerts in the video component of the selected service or choose **Don't Allow** otherwise. For more information about EAS alerts, see **Using the EAS Alert Insertion Feature**, on page 30.

**Step 9** Click **Apply**.
Performing a Banner Insertion

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Processing tree, double-click the logo inserter branch with the service in which a banner must be inserted. The Logo Inserter Service page appears.

Step 3 Click Overview. The Logo Inserter Overview page appears.

Step 4 In the Service Overview table, click a logo icon of this service. The Logo Inserter Service page appears.

Step 5 Refer to the Manual Banner Insertion area.

Step 6 From the Banner drop-down list, choose the appropriate banner for the text message.

Hint: Click next to the Banner drop-down list to open the settings dialog box of the selected banner. For more information about these settings, see Banner Library, on page 12.

Step 7 Check the Use Default check box if the default text message must be inserted or uncheck this check box otherwise.

Step 8 In the Message field, enter the text message.

Notes

- The maximum number of characters that can be inserted is 4096 if the text height is smaller than or equal to 46 pixels.

- The Message parameter is dimmed if the Use Default check box is checked.

Step 9 In the Duration (s) field, enter the time that the banner must be inserted in the video stream. A value can be added between 15 and 86,400 sec. (24 hours) for a noncontinuous insertion or enter 0 for a continuous (never ending) insertion.

Step 10 Click Insert. The insertion is started and the message and the duration are removed from the Manual Banner Insertion area.

Important An activated banner insertion is indicated in the logo insertion settings overview table and Service Overview table on the Logo Inserter Overview page. See Using the Logo Insertion Overview Page of a Transcoder Card, on page 2.
Stopping a Banner Insertion

**Procedure**

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, double-click the logo inserter branch with the service for which the banner insertion must be stopped. The Logo Inserter Overview page appears.

**Step 3** In the Service Overview table, click a logo icon of this service. The Logo Inserter Service page appears.

**Step 4** In the Manual Banner Insertion area, click Stop.

Using the Banner Insertion Feature of an MFP Card

An MFP allows you to insert a banner with text message and one logo in the video stream of an outgoing service. Before a banner with text message can be inserted in a video stream, the banner with the appropriate logo must be added to the banner library. To add banners to the banner library, see Adding Banners, on page 13.

---

**Caution**

When a banner is inserted in the video stream of a service while an EAS alert is inserted, the EAS alert is removed from the stream and conversely.

---

**Note**

A logo inserted using the banner insertion feature have higher priority than the logos inserted using the logo insertion feature.

Configuring the Banner Insertion Settings

**Procedure**

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, right-click the service for which banner insertion settings must be configured and choose Video.
Performing a Banner Insertion

Procedure

Step 1  In the DCM GUI, choose Service > Tree View from the main menu.
The Tree View page appears.

Step 2  In the Processing tree, right-click the service for which a banner insertion must be started and choose Video.
The MFP Video page appears.

Step 3  Click the Media tab.

Step 4  In the Video Media Settings table, click the Edit arrow in the row of the service.
The MFP Media page appears.

Step 5  Refer to the Manual Banner Insertion area.
The Screen Logos parameter is for future use.

Step 6  From the Allowed Banner drop-down list, choose one of the following values:

- Not Allowed—Banner insertion is not allowed.
- Text only—Banner insertion with only a text message is allowed (no logo).
- Text and 1 Static Logo—Banner insertion with a text message and one static logo is allowed.

Step 7  From the EAS Alerts drop-down list, choose Allow to allow inserting EAS alerts in the video component of
the selected service or choose Don’t Allow otherwise. For more information about EAS alerts, see Using the
EAS Alert Insertion Feature, on page 30.

Step 8  Click Apply.

Notes:

- The maximum number of characters that can be inserted is 1500 if the text height is smaller than or equal to 90 pixels.
• The **Message** parameter is dimmed if the **Use Default** check box is checked.

**Step 9** In the **Duration (s)** field, enter the time that the banner must be inserted in the video stream. A value can be added between 15 and 86400 sec. (24 hours) for a noncontinuous insertion or enter 0 for a continuous (never ending) insertion.

**Step 10** Click **Insert**.

The insertion is started and the message and the duration are removed from the **Manual Banner Insertion** area.

---

**Tip**

The status of the banner insertion is indicated next to **Status** in the **Manual Banner Insertion** area and in the **Video Media Settings** table.

---

**Stopping a Banner Insertion**

**Procedure**

**Step 1** In the DCM GUI, choose **Service > Tree View** from the main menu. The **Tree View** page appears.

**Step 2** In the **Processing** tree, right-click the service for which the banner insertion must be stopped and choose **Video**.

The **MFP Video** page appears.

**Step 3** Click the **Media** tab.

**Step 4** In the **Video Media Settings** table, click the **Edit** arrow in the row of this service.

The **MFP Media** page appears.

**Step 5** In the **Manual Banner Insertion** area, click **Stop**.

---

**Using the EAS Alert Insertion Feature**

The logo inserter can participate in emergency alert system (EAS) applications to inform the subscriber in case of emergencies such as hurricanes, earthquakes, and so on. The logo inserter is able to insert EAS alerts with the appropriate information together with one or multiple accompanying logos, indicating the seriousness of the emergency, in the video stream of services. An EAS alert insertion can be started manually or can be controlled by an EAS system using the XML interface or SCTE18 protocol.

---

**Caution**

When an EAS alert is inserted in the video stream of a service while a banner is inserted, the banner is removed from the stream and vice versa.
Restriction: The total area occupied by a banner and logos inserted using a Transcoder Card, is limited. When this total area exceeds 25 percent of the video resolution, the last logos are not inserted.

About EAS Alert Insertion Controlled by an EAS System Using the SCTE18 Protocol

An EAS alert insertion can be triggered by an EAS system using the SCTE18 protocol. When the DCM receives an EAS message from an EAS system, the banner of which the name matches the EAS event code of the message is inserted in the services for which EAS alert insertion is enabled. If no banner matches this EAS event code, the sample banner of the DCM is used. The text that is inserted in the banner is derived from the alert text of the EAS message.

Note

- If the DCM receives an EAS message while a banner insertion is active, the active banner is replaced by the banner with EAS alert.
- If a banner insertion is activated for a service while a banner with EAS alert is active, the active banner with EAS alert is replaced by the activated banner.
- The EAS alert insertion is not executed if the banner consumes more license keys that available.
- The EAS alert insertion is not executed for a service if the banner, which must be inserted, does not correspond with the Allowed Banner parameter of the service. For example, if a banner is chosen with animated logos and the Allowed Banner parameter of the service is set to Static Logos.
- Repeated SCTE18 messages do not trigger additional EAS banner insertions.
- Already processed emergency alerts (identified by the EAS event ID) are not processed again within a time window of 24 hours. The latter means that after 24 hours, when an emergency alert message arrives with the same EAS event ID as a previous alert, it is considered as a new emergency alert message and triggers a banner insertion.

Steps to Take

For Manual EAS Alert Insertion

The following list describes the steps to take to insert an EAS alert manually in services.

1. Route the incoming service to the output through the Transcoder or MFP card. See Routing a Service to the Output Through the Transcoder or MFP Card, on page 16.

2. Add the logos, which must accompany the message, to the logo library of the DCM. See Logo Library, on page 4.

3. Create an appropriate banner with logos for the EAS message. See Banner Library, on page 12.

4. Set the EAS Alerts parameter for the services in which the EAS message must be inserted.

5. Start the EAS alert insertion as described in Performing a Manual EAS Alert Insertion, on page 33.

For EAS Alert Insertion controlled by an EAS system using the SCTE18 protocol

The following list describes the steps to take to insert an EAS alert in services controlled by an EAS system using the SCTE18 protocol.
1 Establish a connection between the EAS system and the DCM by creating an EAS proxy. See Using EAS Proxies, on page 34.

2 Route the incoming service to the output through the Transcoder or MFP card. See Routing a Service to the Output Through the Transcoder or MFP Card, on page 16.

3 Add the logos, which must accompany the message, to the logo library of the DCM. See Logo Library, on page 4.

4 Create an appropriate banner with logos for the EAS message. See Banner Library, on page 12.

5 Set the EAS Alerts parameter for the services in which the EAS message must be inserted.

Allowing EAS Alert Insertion for a Particular Service Processed by a Transcoder Card

Procedure

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, double-click the service for which the EAS alert insertion must be enabled. The Logo Inserter Service page appears.

**Step 3** From the EAS Alerts drop-down list in the Banner Insertion area, choose Allow to allow inserting EAS alerts in the video component of the selected service or choose Don't Allow otherwise.

**Step 4** Click Apply.

Allowing EAS Alert Insertion for a Particular Service processed by an MFP Card

Procedure

**Step 1** In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

**Step 2** In the Processing tree, right-click the service for which the EAS alert insertion must be enabled and choose Video.
The **MFP Video** page appears.

**Step 3** Click the **Media** tab.

**Step 4** In the **Video Media Settings** table, click the **Edit** arrow in the row of this service. The **MFP Logo** page appears.

**Step 5** From the **EAS Alerts** drop-down list in the **Banner Insertion** area, choose **Allow** to allow inserting EAS alerts in the video component of the selected service or choose **Don't Allow** otherwise.

**Step 6** Click **Apply**.

---

### Performing a Manual EAS Alert Insertion

**Procedure**

**Step 1** In the DCM GUI, choose **Configuration > Media** from the main menu and then click the **Banner** tab.

**Step 2** Refer to the **Emergency Alert System** area.

**Step 3** From the **Banner** drop-down list, choose the appropriate banner for the EAS alert.

**Step 4** Check the **Use Default** check box if the default text must be used of the selected banner, uncheck this check box otherwise.

**Step 5** In the **Message** field, enter the text message.

**Notes:**

- For EAS alert insertion using a Transcoder Card, the maximum number of characters that can be inserted is 4096 if the text height is smaller than or equal to 46 pixels. For EAS alert insertion using an MFP, the maximum number of characters that can be inserted is 1500 if the text height is smaller than or equal to 90 pixels.

- The **Message** parameter is dimmed if the **Use Default** check box is checked.

**Step 6** In the **Duration (s)** field, enter the time that the EAS alert must be inserted in the video streams.

**Step 7** Click **Start EAS**.

The insertion is started and the text message and the duration are removed from the **Emergency Alert System** area.

---

**Note**

An activated EAS alert insertion is indicated in the logo insertion settings overview table and the **Service Overview** table on the **Logo Inserter Overview** page. See Using the Logo Insertion Overview Page of a Transcoder Card, on page 2.
Using EAS Proxies

The DCM allows you to process in-band cable emergency alert message (CEAM) packets (labeled with PID: 0x1FFB) and out-of-band CEAM packets (labeled with PID 0xFFC) coming from the EAS system using the SCTE-18 protocol. The DCM receives the out-of-band packets, carried using UDP (User Datagram Protocol) data packets, on one of its management ports. To establish connection between the DCM and the EAS system, an EAS proxy must be created.

Creating EAS Proxies

Procedure

Step 1 In the DCM GUI, choose Configuration > Proxy from the main menu and then click the EAS tab. The Proxy EAS page appears.

Step 2 Refer to the ADD EAS Proxy area.

Step 3 In the EAS Name field, enter a name for the EAS proxy. The name must be unique, spaces and uppercase/lowercase are ignored.

Step 4 From the Interface drop-down list, choose the management port that is used by the DCM to establish connection with the EAS: 10/100, or GbE. When NIC (network interface card) teaming is switched on, the NIC teaming pair is indicated by Bond 1.

Step 5 From the Type drop-down list, choose the socket type: Unicast, Multicast, or Broadcast.

Step 6 For a Multicast socket type, enter the multicast IP address in the IP field. Notes:

• The IP box is dimmed for a unicast or broadcast socket type.
• For an IPv6 IP address, use a format as recommended by RFC 5952.

Step 7 In the UDP field, enter the UDP port number.

Step 8 Choose Enabled or Disabled from the Text Crawl drop-down list to enable or to disable the insertion of EAS alerts if appropriate SCTE18 messages arrive.

Step 9 Click Add.

Note

• The DCM allows you to create maximum ten EAS proxies.
• If a UDP port is already in use on the selected interface (for instance, UDP port 5168 for splicing purposes), creating an EAS proxy with this UDP port is not possible.
Changing EAS Proxies

Procedure

Step 1  In the DCM GUI, choose Configuration > Proxy from the main menu and the click the EAS tab.
Step 2  In the EAS Proxy Settings table, click the row of the EAS proxy that must be changed.

The Configure EAS Proxy dialog box appears.

Step 3  In the EAS Name field, change the name for the EAS proxy.
Step 4  From the Interface drop-down list, choose the management port that is used by the DCM to establish connection with the EAS: 10/100, or GbE. When NIC teaming is switched on, the NIC teaming pair is indicated by Bond 1.
Step 5  From the Type drop-down list, choose the socket type: Unicast, Multicast, or Broadcast.
Step 6  For a Multicast socket type, change the multicast IP address in the IP field.

Notes:
- The IP box is dimmed for a unicast or broadcast socket type.
- For an IPv6 IP address, use a format as recommended by RFC 5952.

Step 7  In the UDP field, change the UDP port.
Note: Changing the UDP port to a port that is already in use is not possible.
Step 8  Choose Enabled or Disabled from the Text Crawl drop-down list to enable or to disable the insertion of EAS alerts if appropriate SCTE18 messages arrive.
Step 9  Click OK.

Removing EAS Proxies

Note  Deleting an EAS proxy that is in use as CEAM source in an outgoing TS is not allowed.

Procedure

Step 1  In the DCM GUI, choose Configuration > Proxy from the main menu and then click the EAS tab.
Step 2  In the EAS Proxy Settings table, click the row of each EAS proxy that must be removed.
Using the Subtitle Burn-In Feature

The subtitle bit-map stream is encapsulated in an elementary stream that is part of the service. The elementary stream can carry the payload of multiple subtitle bit-map streams each associated with a language or each subtitle bit-map stream can be encapsulated in a separate elementary stream.

The subtitle elementary stream for a service is referenced in the PMT (program map table). The information about the subtitles (language) is indicated in the branch of the incoming elementary stream (0x06) on the Tree View page.

For subtitle burn-in, transcoding must be enabled for the corresponding video stream.

**Important**

- The MFP must receive the subtitles at least 400 ms before burning in. The subtitle spacing must be equal to or greater than 400 ms.
- If the same language is present multiple times in the same elementary stream (for instance, normal and hearing impaired subtitles), the normal subtitles are burned in.

**Restrictions:**

- Subtitle burn-in cannot be combined with logo insertion for the same video stream.
- Subtitle burn-in cannot be combined with splicing and cannot be used for multires profiles.
- Subtitle burn-in by an MFP card is not possible if its MFP Mode is set to Premium Picture Quality Transcode or Encode.
- For subtitle burn-in, the mode of MFP card must be set to High Density Transcode. When the resource setup of an engine is set to 6 SD video, the engine is able to burn in subtitles in two video streams. The other SD slots can then be used for other processes. When the resource setup of an engine is set to 2 HD Video, subtitles can only be burned in one video stream. The second slot can no longer be used.
Configuring Subtitle Burn-in

Procedure

Step 1 In the DCM GUI, choose Service > Tree View from the main menu. The Tree View page appears.

Step 2 In the Processing tree, right-click the service with the video component for which subtitle burn-in must be configured and choose Video Settings. The MFP Video page appears.

Step 3 Click the Media tab.

Step 4 In the Video Media Settings table, click the Edit arrow of the video component. The MFP Media page appears.

Step 5 Refer to the Subtitle Burn In Settings area.

Step 6 From the Mode drop-down list, choose DVB Subtitle to enable subtitle burn-in or choose Disabled otherwise.

Step 7 In the Language field and if subtitle burn-in is enabled, enter the 3-character language code (as specified by ISO 639-2 [15]) of the subtitle that must be burned in.

Step 8 To configure a forced subtitle timeout, check the Forced Timeout check box and enter the timeout in the corresponding field. A value can be entered between 1000 and 30000 ms.

Step 9 Click Apply.

If a subtitle stream matches the entered language and the DCM was able to extract the needed information from the PMT for this stream, the MFP starts burning in the subtitles in the video stream.
Configuring Subtitle Burn-in