coolsign

CoolSign Content Creator
Version 5.0, User's Guide

Haivision

Edition Notices

This edition notice provides important information regarding the documentation for version 5.0 of the CoolSign Digital Media Network product. Later releases are intended to be backwards-compatible, but may introduce new functionality not addressed in this content. Likewise, other product documentation may describe functionality not addressed here that will become available in later releases. Please consult with Haivision Systems, Inc. or its authorized representatives to ensure compatibility.

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Patents

CoolSign is covered by U.S. Patent Number 7,136,906 "System for Electronically Distributing, Displaying and Controlling the Play Scheduling of Advertising and Other Communicative Media" and Patent Number 7,228,341 "Method and System for Electronically Distributing, Displaying and Controlling Advertising and Other Communicative Media." CoolSign may also be covered by one or more pending United States patent applications.

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Haivision
ATTN: Information Development
4445 Garand
Montréal, Québec, H4R 2H9 Canada

Telephone: 1-514-334-5445

Email: info@haivision.com

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Contents

About This Book

Welcome to the CoolSign™ 5.0 User's Guide for version 5.0. This documentation describes how to configure and manage the CoolSign Content Creator software.

Topics Discussed

About Haivision™

Haivision is a global leader in delivering advanced video networking, digital signage, and IP video distribution solutions. Haivision offers complete end-to-end technology for video, graphics, and metadata to help customers build, manage and distribute their media content to users throughout an organization or across the Internet. Haivision has specific expertise in the enterprise, education, medical/healthcare, and federal/military markets.

Haivision acquired the assets of CS Software Holdings, LLC, including the CoolSign product technology, in November, 2010. This acquisition brought together Haivision's IP video streaming capabilities and CoolSign's feature-rich signage solution, with its sophisticated technology to control, schedule, distribute, display, and monitor digital media.

Haivision is based in Montreal and Chicago, with technical centers in Beaverton, Oregon; Austin, Texas; and Hamburg, Germany.

Audience

This user's guide is focused towards an end-user, such as a content creator or network system administrator, who has a basic knowledge of telecommunications equipment, and IP/LAN networking concepts and terminology.

Related Topics

Reliability of Information

The information contained in this user's guide has been carefully checked and is believed to be entirely reliable. However, as Haivision improves the reliability, function, and design of its products, the possibility exists that this user's guide may not remain current.

If you require updated information, or any other Havision product information, contact:

Haivision
4445 Garand
Montréal, Québec, H4R 2H9 Canada

Telephone: 1-514-334-5445
Email: info@haivision.com

Or visit our website at: https://www.haivision.com.

Related Topics

Obtaining Documentation

You can download product documentation through the Havision Download Center at http://www.haivision.com/download-center/.

> **NOTE**
> A login is required to access the Haivision Download Center.

- CoolSign Network Server Quick Start Guide
- CoolSign Stand-Alone Player Quick Start Guide
- CoolSign Personal Demo Server Quick Start Guide
- CoolSign Player Quick Start Guide
- CoolSign Installation Manual
- CoolSign Network Manager User's Guide
- CoolSign Content Creator User's Guide
- CoolSign Release Notes
- CoolSign Datasheet (contains hardware specifications)

Related Topics

- Service Support on page 10
- Obtaining Documentation on page 10

Service Support

For more information regarding service programs, training courses, or for assistance with your support requirements; contact Havision Technical Support using our Support Portal at: https://www.haivision.com/support/.

Related Topics

- Reliability of Information on page 9.

Document Conventions

The following conventions are used throughout this document.

Typographic Conventions and Elements

Italics	Used for the introduction of new terminology or for words being used in a different context, and for placeholder or variable text.
bold	Used for strong emphasis.
`Monospaced`	Used for code examples, command names, options, responses, error messages, and to indicate text that you enter.
Button	Indicates a button or some object that you click.
>	In addition to a math symbol, it is used to indicate a submenu. For instance, File > New where you would select the New option from the File menu.
…	Indicates that text is being omitted for brevity.

Admonition Elements

The following admonition elements are used to advise and counsel that special actions should be taken.

💡 **TIP**

Indicates highlights, suggestions, or helpful hints.

ℹ️ **NOTE**

Indicates a note containing special instructions or information that may apply only in special cases.

IMPORTANT

Indicates an emphasized note. It provides information that you should be particularly aware of in order to complete a task and that should not be disregarded. IMPORTANT is typically used to prevent loss of data.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in damage to data or equipment, or minor to moderate injury. It may also be used to alert against unsafe practices.

1. Getting Started with Content Creator

The CoolSign® Content Creator is a full-featured application for creating content for a Digital Media Network. It is specially designed to aid in the design and creation of content that uses dynamic data, but can be used as a general-purpose content animation tool as well.

Content is perhaps the most important element within a CoolSign Digital Media Network. Without content, your screens would be dark. While CoolSign does not include tools for the authoring of digital assets like bitmaps and video, it supports most of the standard digital file formats used by today's content creation applications including H.264, Windows Media 9, Flash, PhotoShop bitmaps, and PowerPoint slides.

IMPORTANT
The Content Creator tool is not compatible with remote desktop software.

Topics Discussed

CoolSign Content Creator Requirements

Supported Media Formats

Audio	Image	Video	
MP3	bmp gif jpeg png psd	WMV Flash MPEG-1 MPEG-4	AVI M2V MOV MP4 (H.264 only) H.264

Defining Project Settings

When you launch CoolSign Content Creator, the Welcome window automatically appears:

Within Content Creator, all of your work takes place within the context of a project. In this section, you'll define settings for your project.

- To open a new project, click Create new project.

- To open an existing project, click Open existing project and select the project folder. Then choose the menu item Project > Project Settings.

Haivision
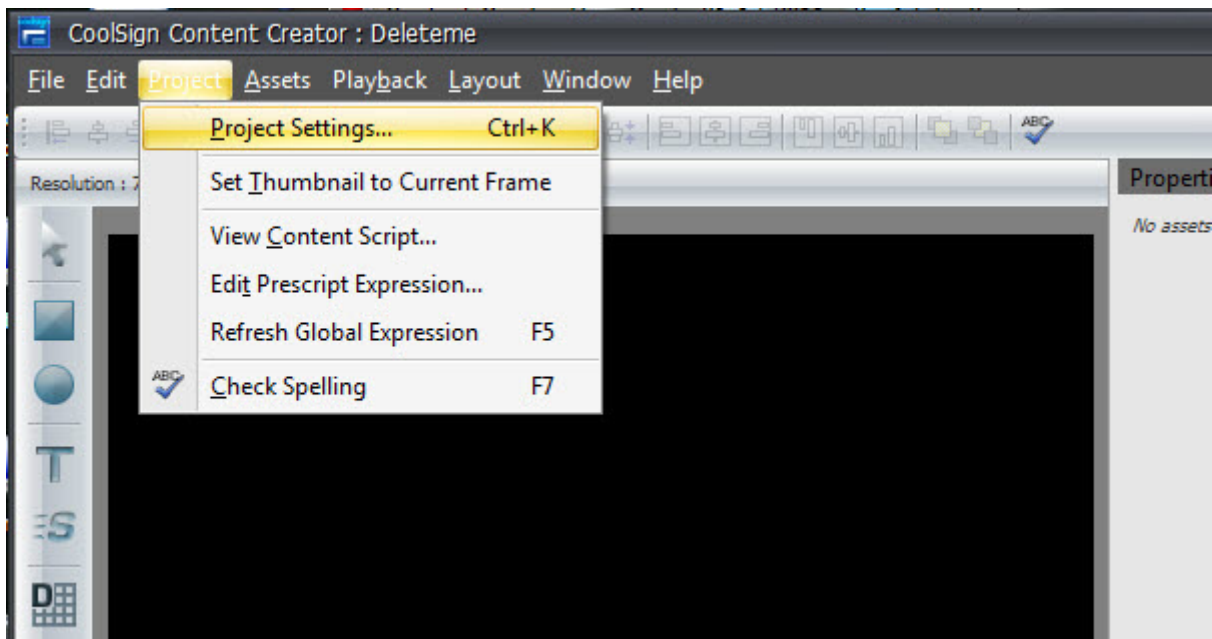
Project Settings

The Project Settings allow you to specify how the content is displayed, transitioned, triggered — even how missing data is handled.

🛑 IMPORTANT

You can only specify the Project Type when you create a new project. Unlike other project settings, the Project Type can not be revised after the project has been created.

The Project Type can be either:

STANDARD — (default) used for developing most individual pieces of content; anything from simple pictures and videos to more complex content that displays dynamic data.

TEMPLATE — used when creating a *model* that will be used to create new instances of content with similar layouts but that might differ in the actual text and/or graphic elements from the model.

General Project Settings

In the General tab, you define the project type[1], name, duration, display type, orientation, and resolution.

Table 1: Project Settings: General Tab
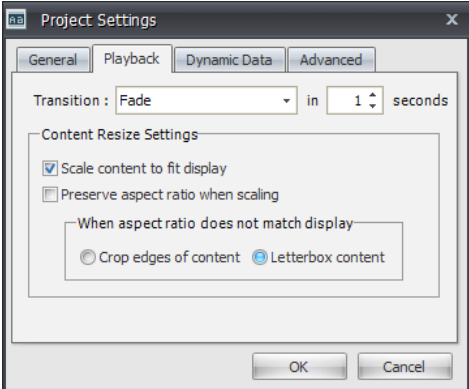
	Fields	Purpose
	Project Type	Select the appropriate listing for the type of content you are creating: • Standard • Template
	Name	The name of your content as it appears in CoolSign Network Manager (CNM).
	Duration	Length that your content plays. The duration is limited by the length of your imported asset.
	Display Type	If you select a preset display type, the orientation and resolution fields are automatically filled in for you. Your content can still be displayed on other display devices but looks best on this display type.
	Orientation	Landscape or portrait, depending on how you'll be orienting the target display device.
	Resolution	The horizontal and vertical resolution of your content in pixels.

---

1. Project Type can only be specified when a new project is being created and not by opening the Project Settings for an existing project.

Playback Project Settings

In the Playback tab, you define the effect that you'll use to transition into this content, along with settings that affect how content is resized during playback.

Table 2: Project Settings: Playback Tab

	Fields	Purpose
	Transition	Sets the effect that is used to transition from the previous played content into this content. You can also define the duration of the transition effect in seconds.
	Scale Content to Fit	Scales content to fit the resolution of the player the content is scheduled on. If the aspect ratio of the player does not match the content's aspect ratio, the content is stretched non-linearly to fill the player (unless you also check Preserve Aspect Ratio).
	Preserve Aspect Ratio	Forces scaled content to preserve its original aspect ratio when played on players with different resolutions and aspect ratios than that of the content. The behavior of this checkbox is further defined by the following radio buttons:.
		• **Crop edges of content** — When scaling to fit, the content is scaled linearly until the smaller of the content's width or height matches the smaller of the player's width or height. This might result in pixels being cropped off the edge of the player. • **Letterbox content** — When scaling to fit, the content is scaled linearly until the larger of the content's width or height fits into the player's width or height. The empty area that remains is black.

Dynamic Data Project Settings

In the Dynamic Data tab, you define what to do if the data table is empty.

Data tables are mini-databases with a structure that is flexible enough to enable you store anything from a single piece of information to a complex table with dozens of fields and hundreds of records of data. Refer to the *CoolSign Network Mangager User's Guide* for more details.
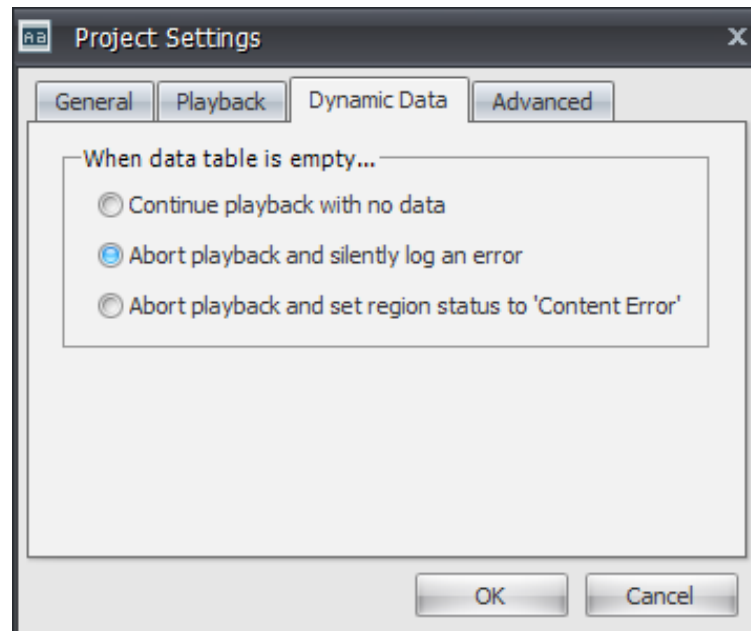
Continue playback with no data — Play the content anyway, even if no data is present.

Abort playback and silently log an error — Don't play the content, but do not log a visible error.

Abort playback and set region status to Content Error — Don't play the content and issue a region status error.

When you're done, click the Advanced tab.

Advanced Project Settings

In the Advanced tab, you can define additional settings that affect your content.
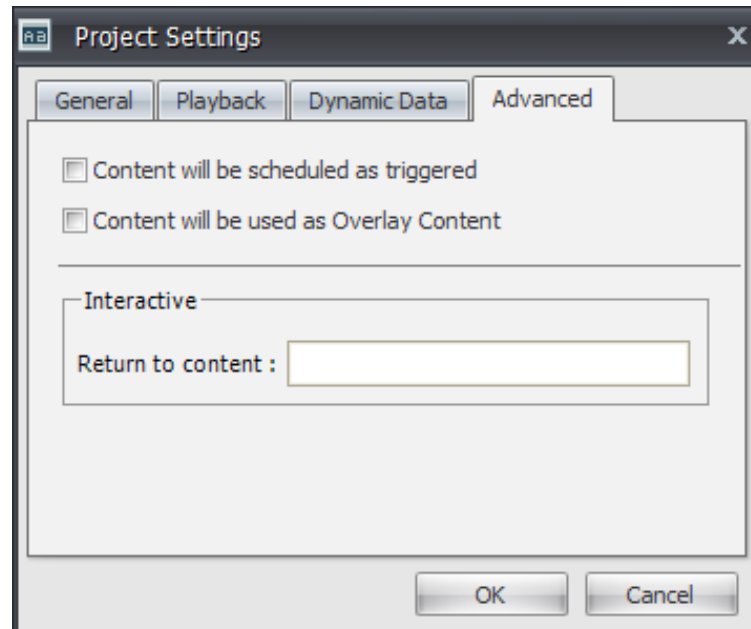
☑**Content scheduled as triggered** — Check this box if you are creating dynamic content that you intend to schedule as triggered with CNM. This setting modifies the content scripts to work correctly when triggered.

☑**Content used as Overlay Content** — Check this box if you are creating content that you intend to use in the Overlay Content channel of a player. Overlay content is played on top of the currently tuned channel's content. (Deprecated; this checkbox is provided to support legacy content. See the discussion of "Layering Regions" in the "Configuring Players" section of the *CoolSign Network Mangager User's Guide*.)

Return to content — If you are creating content that you intend to be interactive, you can enter the name of the content that should be played immediately after this content is played.

When you're done, click OK to save your project settings and open the Content Creator workspace.

Understanding the Content Creator Workspace

The Content Creator workspace enables you to define, layout, and preview your CoolSign content as you work.
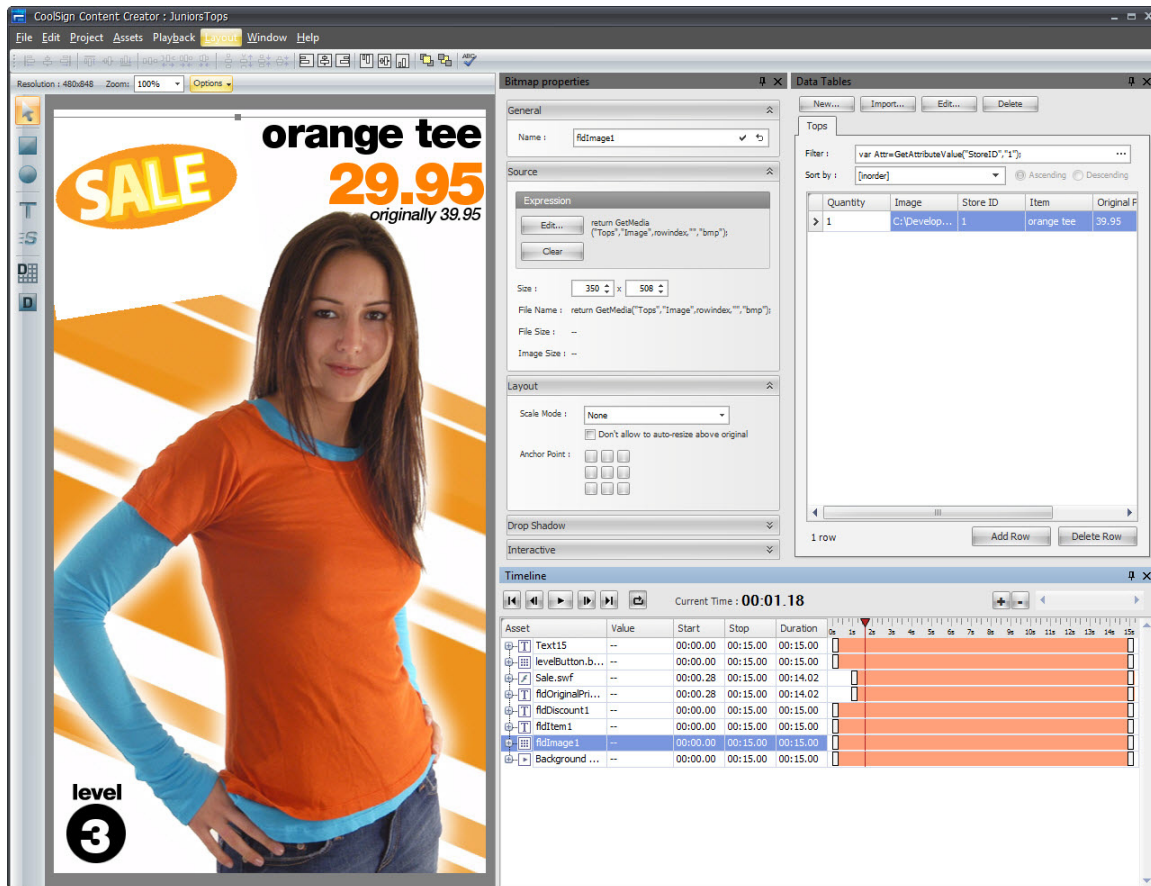
The workspace contains the following components:

Menu bar — Contains menus for performing tasks. Many of the menu functions can also be accomplished from the keyboard or by using other Graphical User Interface (GUI) controls. For example, you can start content playback by choosing PLAYBACK > PLAY, entering Ctrl-P, or clicking the Play arrow button in the Timeline window.
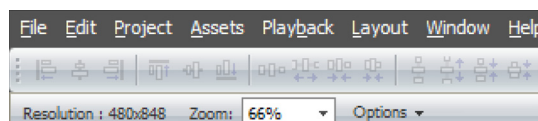
Media window — Displays the current content as well as a toolbar for manipulating and creating assets. You can think of the media window as the stage on which all of your actions take place: drawing shapes, adding text, resizing content, positioning imported assets, laying out data fields, and viewing content playback. See "Using the Media Window" on page 22.

Timeline window — Contains buttons for previewing the playback of your content and lists all of the layers in your project. See "Using the Timeline Window" on page 47.

Properties window — Displays properties for the asset that is currently selected in the timeline window or media window.

Data Tables window — Enables you to create and manage the dynamic data table that is used to provide data to your content. See "Using Templates" on page 53.

Customizing Your Workspace

The Content Creator attempts to size and position the windows within your workspace to best fit the orientation of the content and the size of the screen. If necessary, you can easily resize, hide, dock, and undock the windows and save the changes to your own custom layout.

To save your current workspace:

1. Choose WINDOW > SAVE CURRENT LAYOUT.

2. Enter a name for your new layout, and click OK.

To load an existing workspace:

1. Choose WINDOW > LOAD WINDOW LAYOUT.

2. Select the desired layout from the sub-menu.

Using the Media Window

This section describes how to use the Toolbox elements located at the top-left of the Media Window. Toolbox elements are shown below:

Selection Tool

Rectangle Shape Tool

Ellipse Shape Tool

Text Tool

Scroll Tool

Data Panel Tool

Data Field Tool
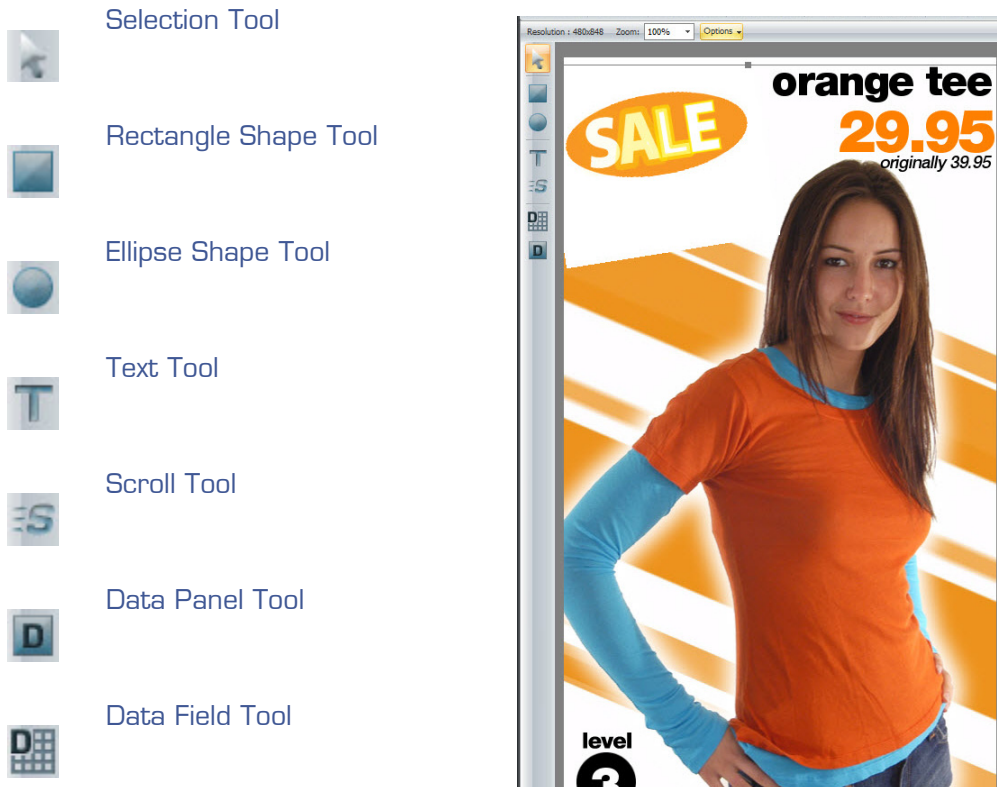
Subsequent sections explain how to perform these tasks in the media window:

- Importing assets (see "Importing Assets into Content Creator" on page 25)
- Drawing shapes (see "Creating Shapes" on page 36)
- Adding text (see "Creating Text Fields" on page 38)
- Scrolling your content (see "Scrolling Your Content" on page 42)

Using the Media Window Selection Tool

The toolbar along the left side of the media window (refer to the previous graphic) provides various tools for adding new assets or manipulating the assets in your content. You can use the Selection Tool to select, reposition, resize, and rotate assets in the media window.

To select an asset in the media window:

1. Select the Selection Tool.

2. Click the asset in the media window or in the timeline.

To reposition an asset in the media window:

1. Select the Selection Tool.

2. Click and drag the asset in the media window (or in the timeline) to the position you want to set.

To resize an asset in the media window:

1. Select the Selection Tool.

2. Click the asset (in the media window or in the timeline) to select it.

3. Click and drag on one of the selection box handles. Hold SHIFT to constrain both dimensions.

To rotate an asset in the media window:

1. Select the Selection Tool.

2. Click the asset (in the media window or in the timeline) to select it.

3. While holding down the CTRL key, click and drag on one of the selection box handles.

Using the Media Window Zoom Control

If your content does not fit within the media window, you can zoom in or out to make it fit.

To resize your content within the media window:

• Select a zoom percentage from the ZOOM pull-down menu. You can also click in the Zoom box and enter a custom zoom level.
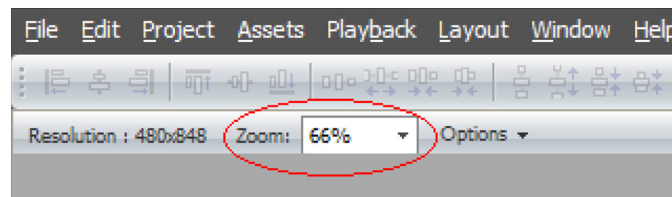
Setting Display Options in the Media Window

At the top of the media window, you can pull down the OPTIONS menu to set the following display options:

```
Options ▾
  √    Show Selection Handles
       Show Media Info
       Show FPS
       Toggle Full Screen
       Dump Trace
```
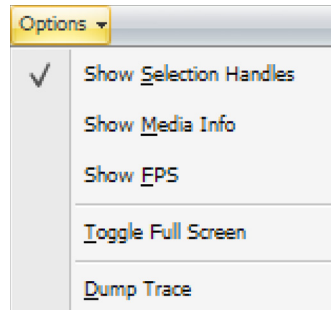
☑**Show Selection Handles** — When this option is selected (checked), some elements might display selection handles or other GUI elements to help you manipulate them interactively in the media window. You can hide the elements if you want to view the content as it appears when played using CoolSign Network Manager. (These elements are automatically hidden for you during content playback.) To hide GUI elements, uncheck **Show Selection Handles**.

☑**Show Media Info** — When this option is selected (checked), the media window displays the filename, resolution, and frame rate for each imported bitmap, video, or flash asset.

☑**Show FPS** — When this option is selected (checked), displays system performance information in the top-left corner of the media window. Information includes the frame rate per second as well as CPU and memory usage.

☑**Toggle Full Screen** — When this option is selected (checked), displays the media window in full-screen mode, hiding all other functions of the Content Creator. To exit full screen mode, press Alt+Tab.

☑**Dump Trace** — When this option is selected, saves and stores a diagnostic log of recent activity at:

C:\Users\user_name\AppData\Local\CoolSign\Content Creator\Logs\

2. Content Creation Basics

Topics Discussed

Importing Assets into Content Creator

This section explains how to import static images, digital video, and Flash files into your project.

All asset types have the following properties:

Name — By default, the asset's name matches that of the imported file. You can change the asset name to a more appropriate name if desired.

Size — The width and height of the asset, respectively. You can click in the Size boxes to resize an imported asset.

File Name — The full path to the file used for the asset.

File Size — The disk size of the imported file.

You can also define an asset's layout properties:
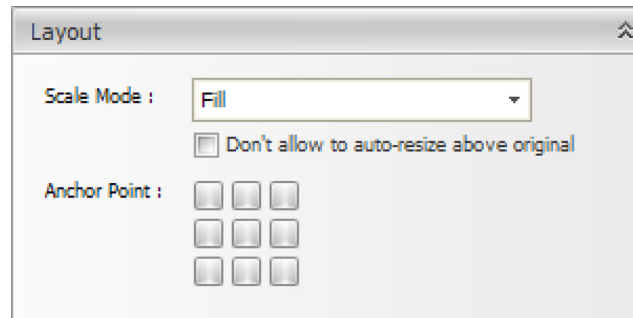
Scale Mode— You can select Fill or Letterbox to change the appearance of the asset when its size differs from the size of the media that it contains.

Anchor Point — If the scale mode is not Fill, you can click one of the nine boxes to control whether the media remains centered or floats to a particular side of the bounding box.

Other properties are specific to the type of asset. For details, see the following discussions:

- Importing bitmaps (see "Importing Bitmaps into your Project" on page 26).
- Importing video (see "Importing Video Into Your Project" on page 32).
- Importing Flash files (see "Importing Flash Into Your Project" on page 34).

Importing Bitmaps into your Project

Content Creator supports 32-bit images in the following formats: Adobe Photoshop (*.psd), JPEG (*.jpg), Windows Bitmap (*.bmp), Portable Network Graphics (*.png), and Graphics Interchange Format (*.gif). If the image contains an alpha channel, the black areas of the alpha channel are transparent.

To import a bitmap into your project:

1. Choose ASSETS > IMPORT FILE...

2. In the dialog box, select the asset file to import.

To edit bitmap properties:

1. Select the bitmap in the media window or in the timeline to display the Bitmap properties window.
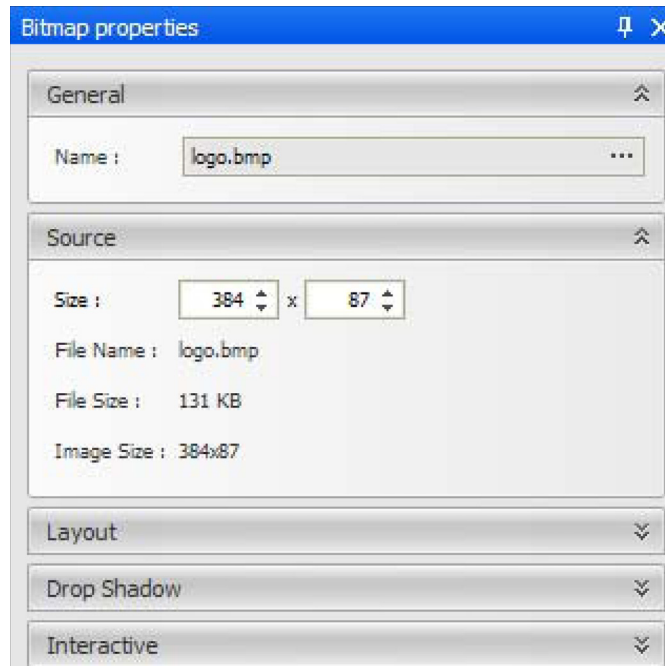
2. In addition to the properties that are common to all assets (name, size, file name, and file size), bitmap assets have the following property:

Image Size — The original unscaled size of the imported file.

3. You can set properties to add a soft drop shadow to bitmap assets:
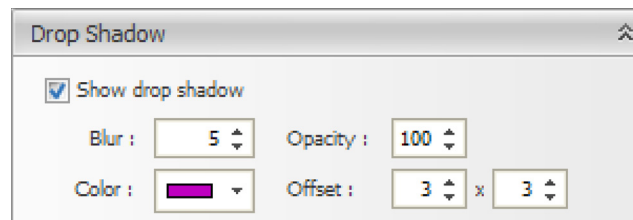
☑Show drop shadow — When checked, show a drop shadow on the selected asset.

Blur — How soft the drop shadow should be.

Opacity — The opacity of the drop shadow effect.

Color — The color of the drop shadow.

Offset — The offset in pixels that the drop shadow should be positioned.

4. If you are building interactive content, you can specify the content to play when this shape is clicked.
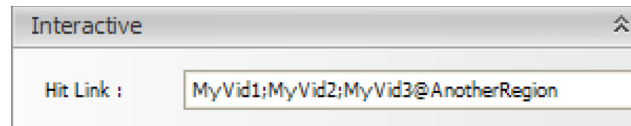
Hit Link   The name of the content to play when this shape is clicked.

To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. In this example, the content named MyVid1 plays in the region containing the object that was just clicked, and MyVid2 is queued to play after it. Meanwhile, MyVid3 immediately begins playing in AnotherRegion.

IMPORTANT

The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.

Creating Interactive Content

In the following example, Hit Link content has two link areas (Link to Item 1 and Link to Item 2) that when clicked, triggers the appropriate content item to play.
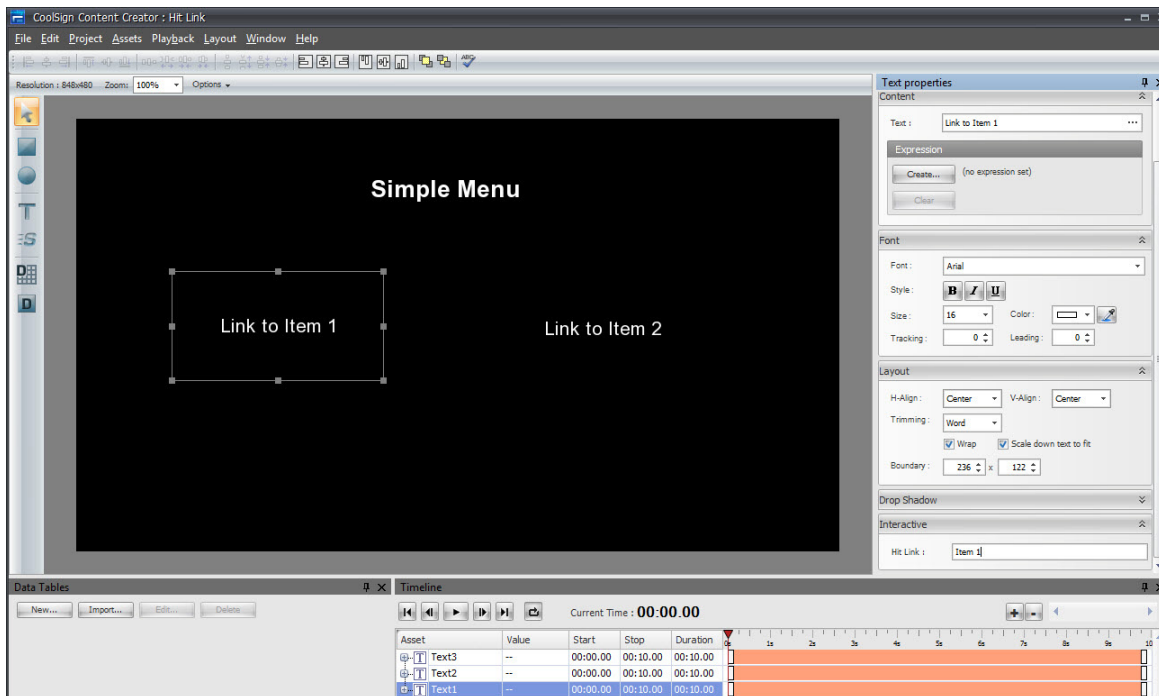
All interactive content using the Hit Link feature needs to be scheduled in the channel using the CNM Channel Manager. In the previous example, the Simple Menu content also has to be scheduled.
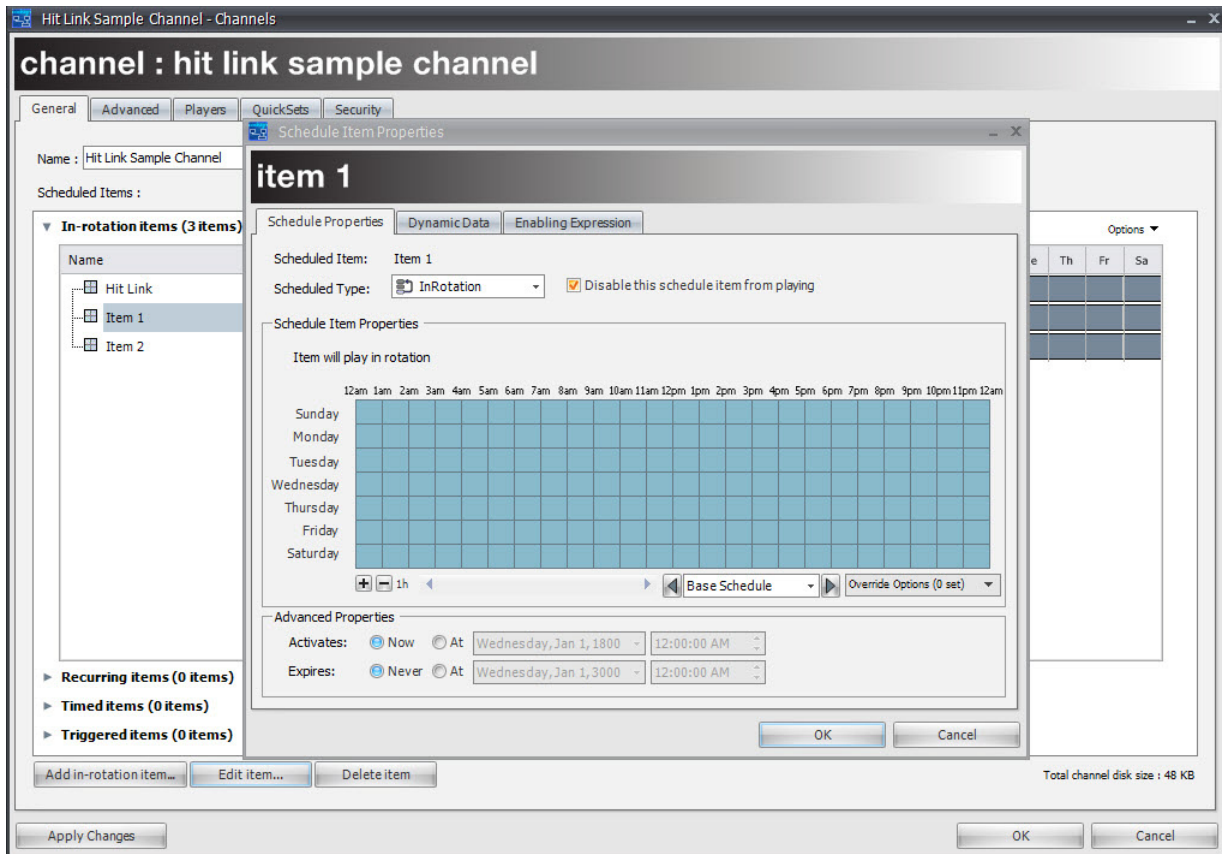
Once scheduled, the Hit Link content plays. In this case, Item 1 for 15 seconds and Item 2 for 5 seconds.
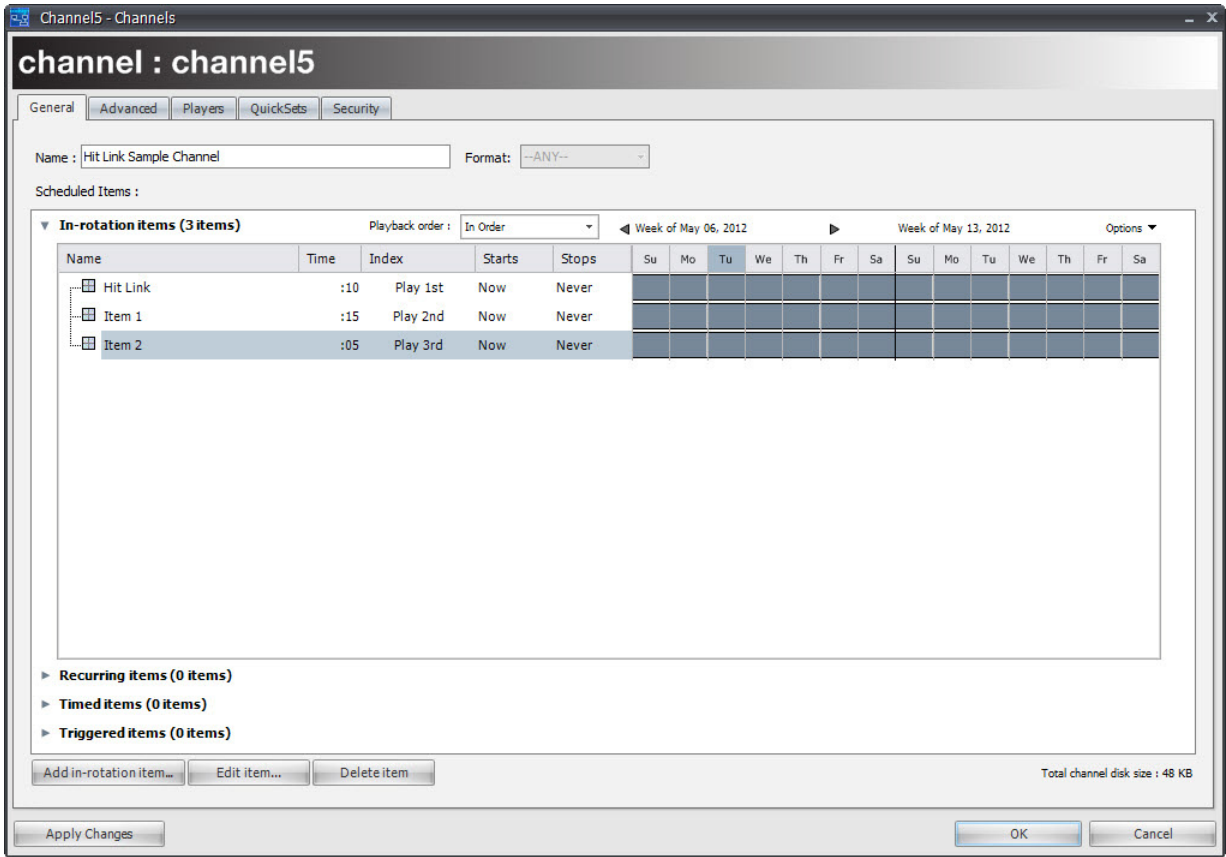
The Hit Link content must be disabled; otherwise, it will play continuously. By disabling, the Hit Link content only plays when clicked.
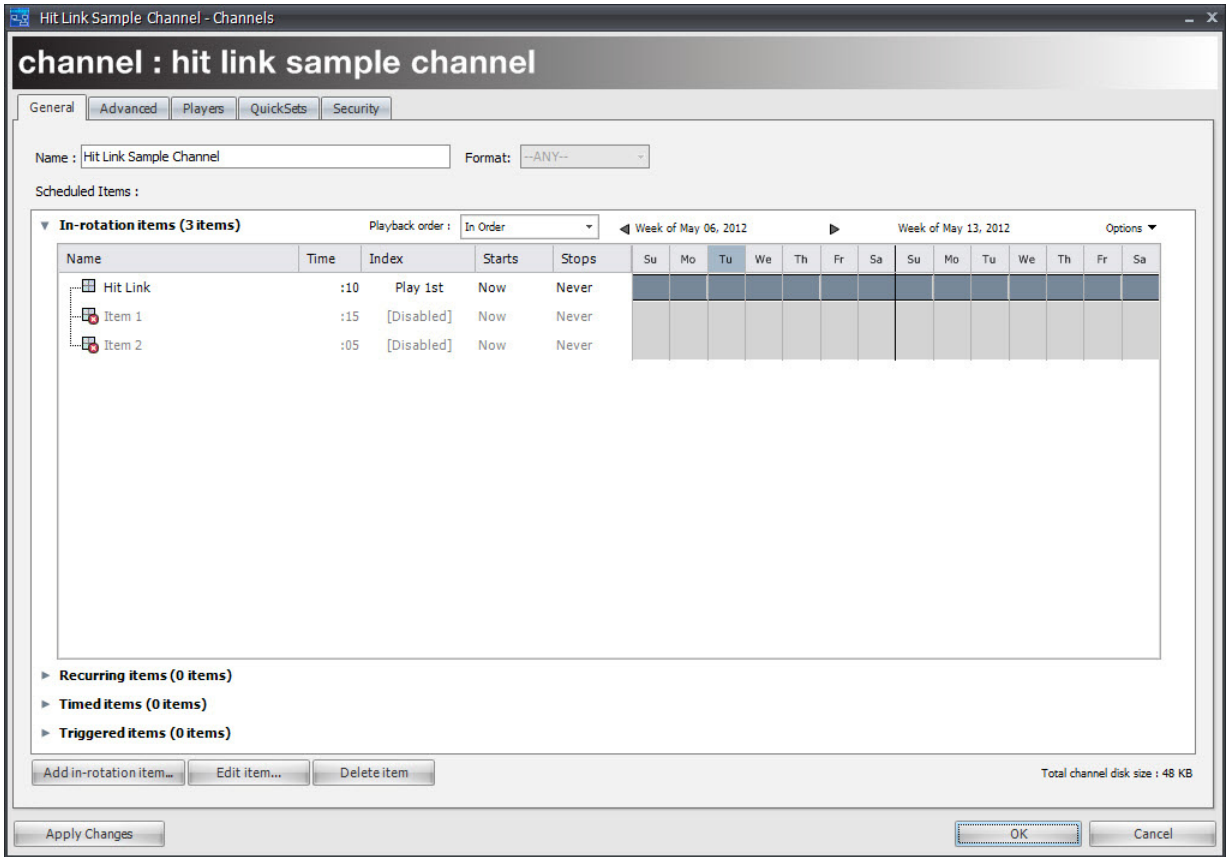
The home content plays as scheduled and items 1 and 2 play only when clicked.
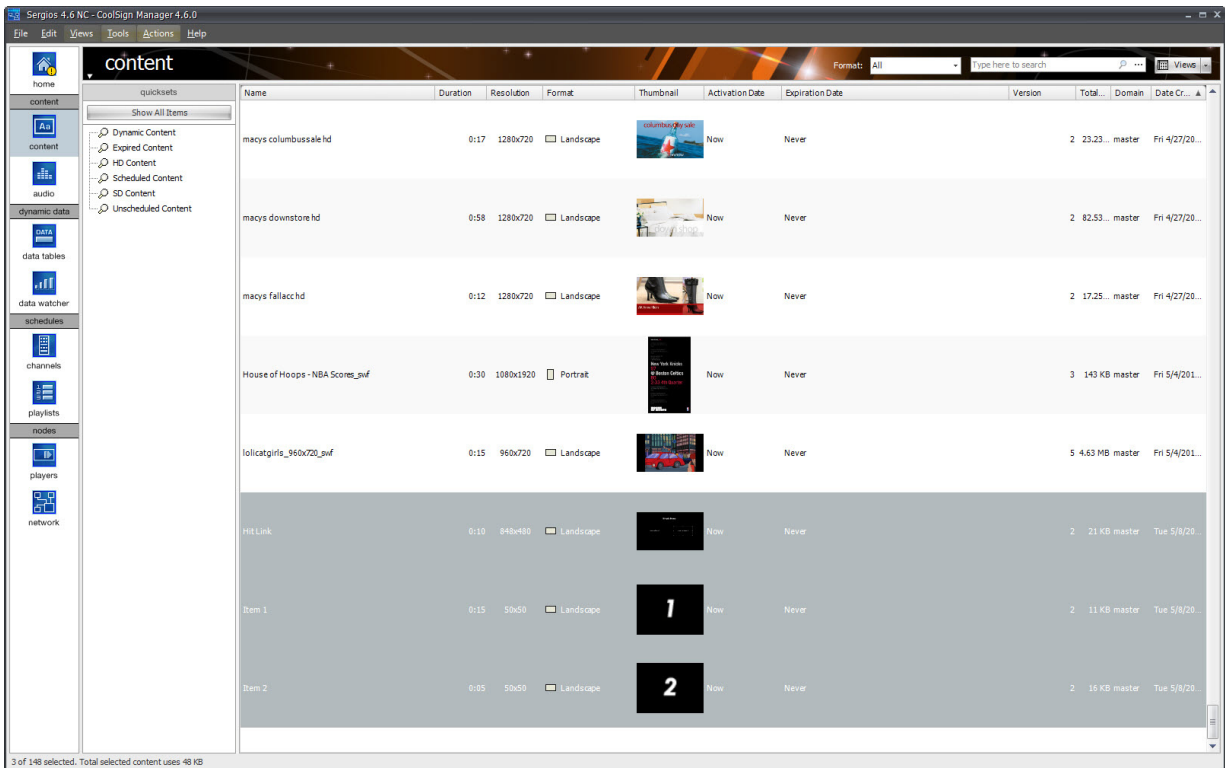
Importing Layered Adobe Photoshop Files Into Your Project

When you import a layered Photoshop file into your project, the Content Creator creates bitmap assets for each layer. This allows you to manipulate individual layers in the Content Creator timeline panel.

IMPORTANT
The Photoshop file must be a 16-bit or 32-bit RGB-type file. Layer effects and adjustment layers are not supported. Also, grouping layers into folders in the Photoshop Layer window is not supported.

To import a layered Photoshop file into your project:
• Choose ASSETS > IMPORT PHOTOSHOP WITH LAYERS...

Importing Video Into Your Project

Content Creator supports the following digital video formats:
• MPEG-4 (*.mpg or *.mp4)
• MPEG-1 (*.mpg)

- AVI (*.avi)
- Windows Media 9 (*.wmv)
- H.264 (*.mov files created using the H.264 compressor/codec).

To import a video into your project:

1. Choose ASSETS > IMPORT FILE...

2. In the dialog box, select the asset file to import.

To edit video properties:

1. Select the video asset in the media window or timeline to display the Video properties window:
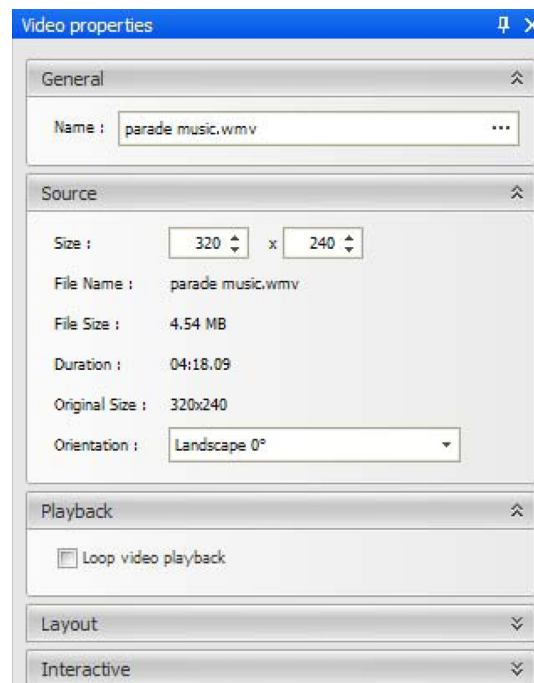

2. In addition to the properties that are common to all assets (page 25), video assets have the following properties:

Duration — The duration of the imported movie.

Original Size — The original unscaled size of the imported movie.

Orientation — The orientation at which the movie was authored. You can use the pull-down menu to change the orientation.

Loop video playback — When checked, forces the video to loop continuously while the content is playing. This is only useful if the duration in timeline is greater than the length of the video asset.

Hit Link — If you are building interactive content, you can specify the name of the

content to play when this video is clicked. To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. For an example of this usage, see the description of Hit Link on page 26."Hit Link" on page 28

The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.

Importing Flash Into Your Project

You can import Shockwave Flash (SWF) files exported from Adobe Flash or Adobe LiveMotion. ActionScript-driven Flash is supported if you enable the Timeless option (page 36).

To import a Flash file into your project:

1. Choose ASSETS > IMPORT FILE...

2. In the dialog box, select the asset file to import.

TIP

If you set the background color of an SWF movie to #0000FF (R:0 G:0 B:255), it is treated as transparent with CoolSign.

To edit flash properties:

1. Select the flash asset in the media window or timeline window to display the Flash Properties window:
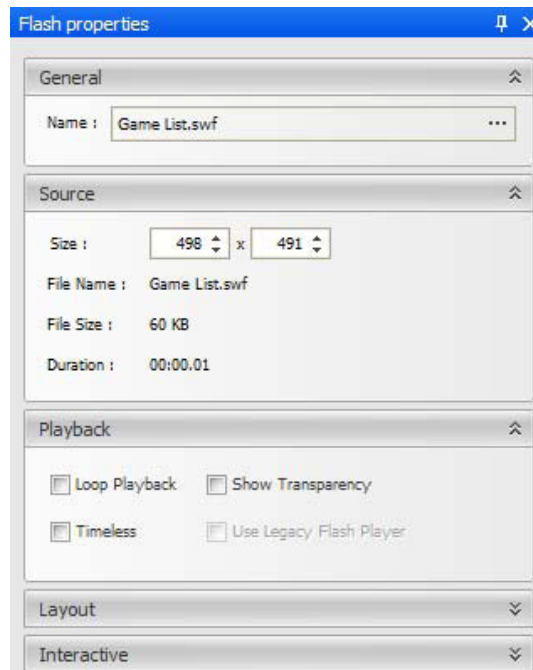
Verify that the name of the Flash content does not contain any of the special characters that are disallowed in file names (/ \ : etc.).

2. In addition to the properties that are common to all assets (page 25), Flash assets have the following properties:

Duration — The duration of the imported SWF.

Loop Playback — When checked, forces the SWF to loop continuously while the content is playing.

Show Transparency — When checked, whatever areas of the Flash file were designed to be transparent are rendered with a transparent background. Checking this box has no visible effect if the Flash file contains no transparency.

Timeless — When checked, ignores the Flash asset's timeline.

Use Legacy Flash Player — When checked, provides backward compatibility for SWF files earlier than Flash 4.

Hit Link — If you are building interactive content, you can specify the name of the content to play when this video is clicked. To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. For an example of this usage, see the description of Hit Link on page 26.

Alternatively, you can set up the hit link via an ActionScript call. For details, see the

tech note "*Accessing CoolSign Data from Flash*", available from Haivision Systems Inc. EEK! Tech Note reference.


IMPORTANT

The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.


Creating Shapes

The Content Creator provides a rectangle shape tool and ellipse shape tool for creating basic shapes in your content. The shapes can be set with a fill color, a stroke color, and a stroke width.

To create a rectangle shape tool:

1. Select the rectangle shape tool.

2. Click and drag in the media window to create the rectangle. Hold down SHIFT to constrain the shape to a square.

To create an ellipse shape tool:

1. Select the ellipse shape tool.

2. Click and drag in the media window to create the ellipse. Hold down SHIFT to constrain the shape to a circle.

Haivision

To edit shape properties:

- Select the shape in the media window or timeline to display the Shape Properties window:
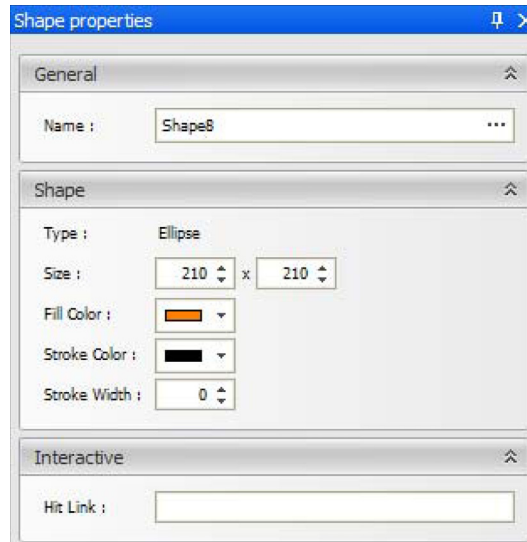
Name — The name of the shape as it appears in the timeline and script.

Type — The type of shape.

Size — The width and height of the shape, respectively.

Fill Color — The color that is used to fill the interior of the shape.

Stroke Color — The color that is used to stroke the outline of the shape if the Stroke Width is greater than zero.

Stroke Width — Sets the width of the line that is used to stroke the outline of the shape. Setting the stroke width to zero removes the stroke.

Hit Link — If you are building interactive content, you can specify the name of the content to play when this video is clicked. To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. For an example of this usage, see "Creating Interactive Content" on page 28.

IMPORTANT
The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.

Creating Text Fields

CoolSign Content Creator enables you to create text fields in your content. Text fields can contain either static text or be bound to a data table when creating dynamic content.

To create a text asset:

1. Select the text tool.

2. Click and drag in the media window to create the text asset.

To edit text field properties:

1. Select the Selection Tool.

2. Click the text asset in the media window or timeline to display the Text Properties window:
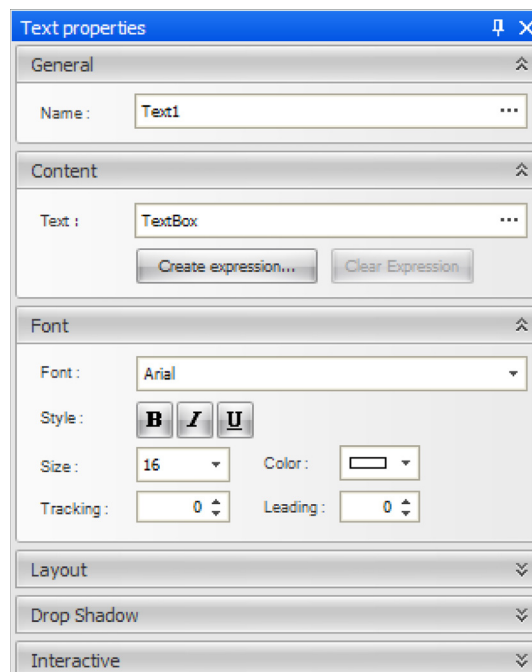
Name — The name of the text asset.

Text — The text string that is displayed in the text field. Click the ellipsis (...) button to open a multi-line text editor if you want to enter multiple lines of text.

Expression — You can enter a JavaScript expression to set the value of the text.

Font — You can set any TrueType or PostScript font that is currently installed on your system.

Style — You can toggle the style buttons to make your text bold, italicized, or underlined.

Size — The maximum point size of the text. The actual point size might be smaller if Resize text to fit is checked.

Color — Specifies the fill color for the text.

Tracking — Sets the spacing between each character in the text. The tracking can range from -100 to 100.

Leading — Sets the spacing between each line in the text. The leading can range from -100 to 100.

Setting Text Layout Properties

You can define properties that determine how your text should be laid out within the text bounding box. This is especially useful when you are creating dynamic data fields where you don't have control over exactly what text might be shown.
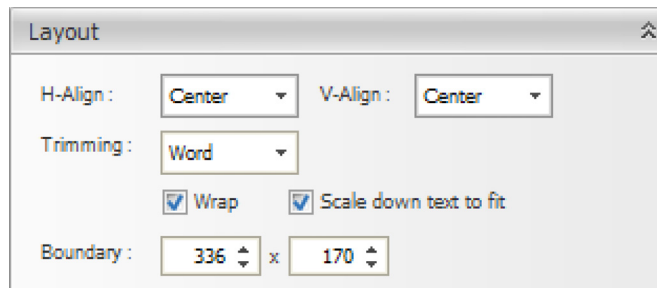
H-Align, V-Align — Specifies the horizontal and vertical alignment of the text within the bounding box. You can set both.

Trimming — Defines how the text box should wrap or crop text that is wider than the bounding box. When Wrap is checked, trimming defines where the text should break for the next line. If Wrap is not checked, trimming defines where the text should be cropped. Trimming has no visible effect when Wrap is off and Scale down text to fit is on.

Wrap — When checked, forces text to wrap to multiple lines if the text doesn't fit on a single line. The Trimming and Resize text to fit properties determine how text is wrapped.

Resize text to fit — When checked, forces the text to fit within the bounding box by decreasing the font size if necessary. Text only resizes after accepting any trimming or wrap properties.

Boundary — Sets the width and height of the text field. You can also set these values by resizing the text field in the media window ("Using the Media Window Selection Tool" on page 22).

Setting Drop Shadow Properties

You can set properties to add a soft drop shadow to text assets:
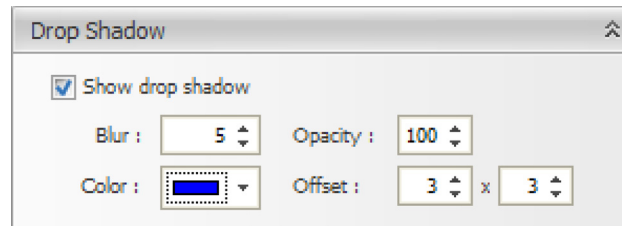
Show drop shadow — When checked, show a drop shadow on the selected asset.

Blur — How soft the drop shadow should be.

Opacity — The opacity of the drop shadow effect.

Color — The color of the drop shadow.

Offset — The offset (in pixels) of the drop shadow.

Setting Interactive Properties

Hit Link — If you are building interactive content, you can specify the name of the content to play when this video is clicked. To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. For an example of this usage, see "Creating Interactive Content" on page 28.

IMPORTANT
The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.

# 3. Advanced Content Creation

Topics Discussed

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Scrolling Your Content

The Content Creator provides a Scroll Tool that you can use to move other assets across the screen at a consistent speed. One common use of this tool would be to implement a scrolling ticker.

To create scrolling text:

1. Select the scroll tool.

2. Click and drag in the media window to define the dimensions of the scroll control. You can subsequently modify the dimensions in the Scroll Properties window.

3. Select the scroll control in the media window or timeline to display the Scroll Properties window:
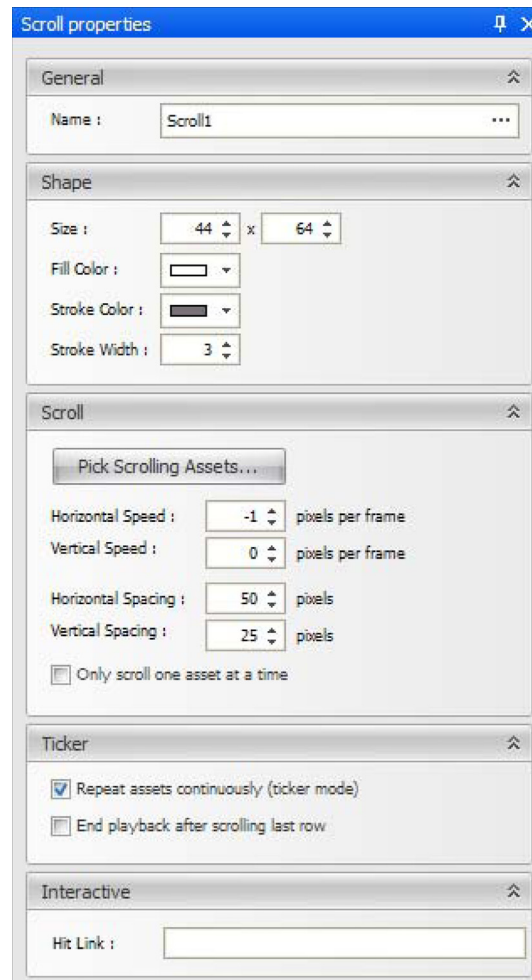
Name — The name of the scroll control as it appears in the timeline and script.

Size — The dimensions (in pixels) of the scroll control.

Fill Color — The color that is used to fill the interior of the scroll control. To specify a transparent scroll control, select the Web tab (in the color selector) and click Transparent.

Stroke Color — The color that is used to stroke the outline of the scroll control if the Stroke Width is greater than zero. To specify a transparent scroll control, select the Web tab (in the color selector) and click Transparent.

Stroke Width — Sets the width of the line that is used to stroke the outline of the scroll control. Setting the stroke width to zero removes the stroke.

Pick Scrolling Assets — Displays the Pick Scrolling Assets dialog. See "The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel." on page 44. for more details.

Horizontal Speed — The speed (in pixels per frame) with which all scrolling assets move across the screen horizontally. To scroll to the right, define a positive horizontal speed. To scroll to the left, make this a negative value.

Vertical Speed — The speed (in pixels per frame) with which all scrolling assets move across the screen vertically. To scroll down, define a positive vertical speed. To scroll up, make this a negative value.

To scroll diagonally (in multiple dimensions), define both a horizontal and vertical speed.

Horizontal Spacing — When scrolling multiple assets across the screen, this value sets the number of pixels that separate each asset horizontally.

Vertical Spacing — When scrolling multiple assets across the screen, this value sets the number of pixels that separate each asset vertically.

Only scroll one asset at a time — Check this box to limit the scroll control to a single asset at a time. The next asset does not appear on the screen until the current asset has completely exited the scroll control's boundaries.

Repeat assets continuously (ticker mode) — Check this box to scroll assets continuously, as with a stock ticker. The ticker clones one set of the assets for each row in the data table.

End playback after scrolling last row — Check this box to cause the entire piece of content to end playback as soon as all rows in the data table have been displayed in the ticker and have finished scrolling off the end of the screen. In the AdPlayer, this causes the next item in the channel schedule to begin to play.

Hit Link — If you are building interactive content, you can specify the name of the content to play when this scrolling element is clicked. To specify multiple pieces of content, separate the names with semicolons. To specify the region in which to play the content, include the @ sign. For an example of this usage, see "Creating Interactive

Content" on page 28.

IMPORTANT

The requested content must be scheduled within the channel. It can be disabled, so that it only plays if someone clicks a Hit Link, but it does need to be in the channel.

To select scrolling assets:

1. Click the Pick Scrolling Assets button in the Scrolling section of the Scroll properties window.
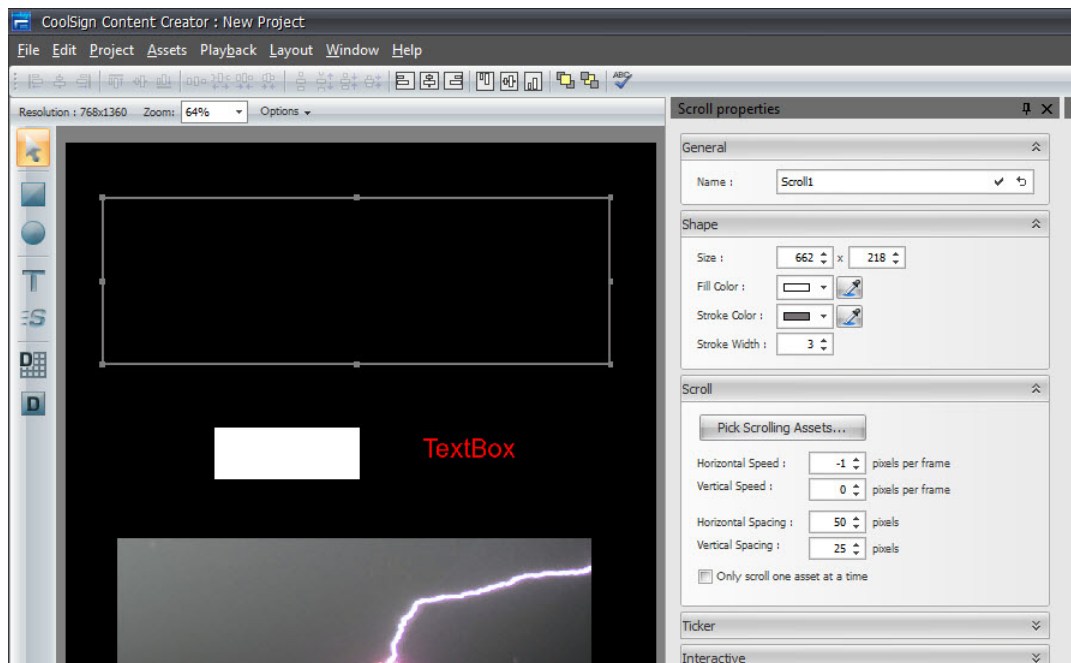
2. In the Pick Scrolling Assets dialog, perform the following actions as required:

    1. To select an asset that you want to scroll, click to select the asset from the list of available assets (on the left), then click the > button.

    2. To select all available assets, click the >> button.

    3. To remove an asset from the list of scrolling assets, click to select it in the list on the right, then click the < button.

    4. To remove all assets from the scrolling list, click the << button.

    5. To reorder the assets in the list on the right, use the up↑ and down↓ arrow buttons.
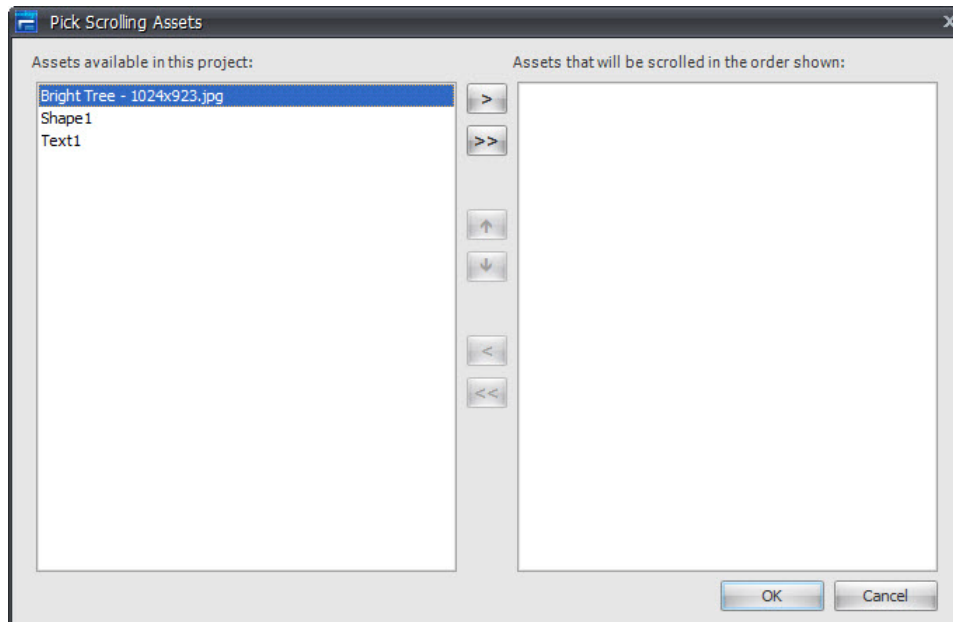
The following limitations apply to scrolling:

- Only text, shapes, and images (not videos) can be scrolled. Text and images can be static, or they can be dynamically retrieved from the data table.

- You cannot scroll another scroll control.

- You cannot scroll an asset that is already assigned to another scroll control in the same project. You must first remove an asset from its current scroll control before you can add it to a different scroll control.

- You cannot scroll an individual data field that is assigned to a data panel.

After exiting the scroll control, the scrolling asset remains visible. To hide an asset that has exited the scroll control, you might want to superimpose a black box, JPEG, or other image.

Playing Your Content Back

The playback controls at the top of the timeline window can be used to play, pause, frame advance, frame rewind, and jump to the beginning or end of the content. The loop button can be toggled for looping playback. The current time of the content is displayed in the time field.

Playback Controls

Loop Playback

Time Field

Time Slider
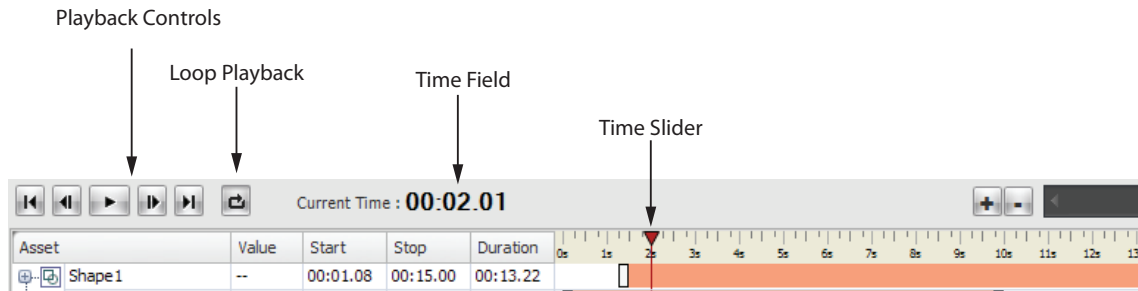
NOTE

You can hold down the frame advance or frame rewind button to advance or rewind the content at a speed of five frames per second.

To start playing your content:

- Click the Play button in the timeline window.

or

- Select the menu item Playback > Play.

To jump to a specific time in your content:

1. Click the time field to display the Go To Time dialog. Or, select PLAYBACK > GO TO TIME.
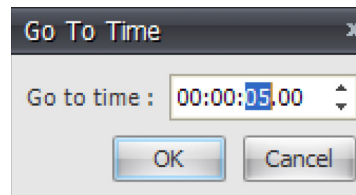
2. Enter the time to jump to.

3. Click OK.

To scrub to a specific time in your content:

- Click and drag the time slider to the desired time.

Using the Timeline Window

The timeline window displays a list of all the assets in your content and enables you to adjust transform properties, set animation key frames, and write transform expressions.

NOTE

The timeline refers to the length of time over which the content is played, and not the time of day scheduled for playback. For information on scheduling, see Chapter 7 "About Scheduling" of the *CoolSign Network Mangager User's Guide*.
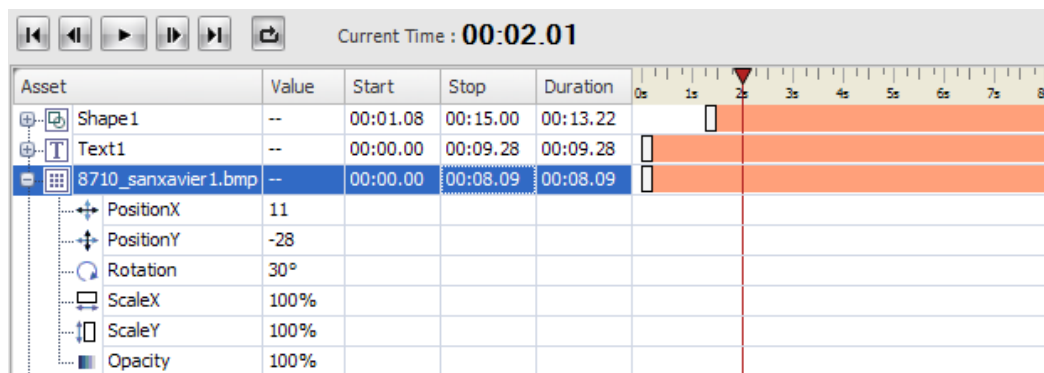
Changing the Layer of Assets in Your Content

Each asset of your content is listed in the timeline window in the order from top to bottom. Assets at the top of the list appear in your content composite above the assets that are below them in the list.

To change an asset's layer:

- From the timeline window, click and drag the asset name above or below the other assets in the timeline window.

To bring an asset to the front:

- Select LAYOUT > BRING TO FRONT.

To send an asset to the back:

- Select LAYOUT > SEND TO BACK.

Setting the Start and Stop Time of Assets

Each asset can be set with a start and stop time. Assets are not visible before and after their start and stop times.

Start Time Field

Stop Time Field

Start Time
Handle

Asset Time Bar
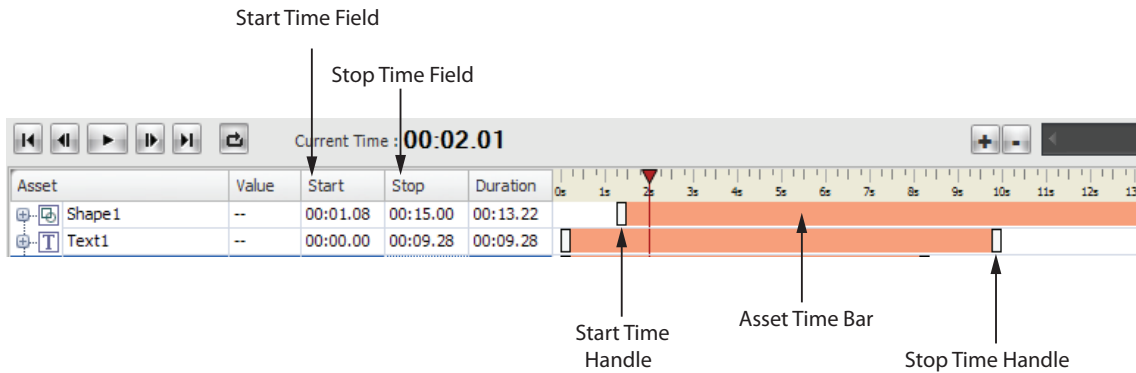
Stop Time Handle

To set the start or stop time of an asset, do one of the following:

- Click and drag on the left or right handle of the asset's time bar to set the start or stop time.

- Edit the start or stop time in the timeline window.

About Transform Properties
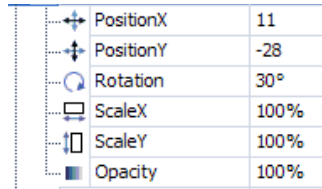
Every asset has a set of transform properties that can be animated. To expand the asset's transform properties, click the + button to the left of the asset's name.

Click the asset's expand/collapse button (+) to view the transform properties.
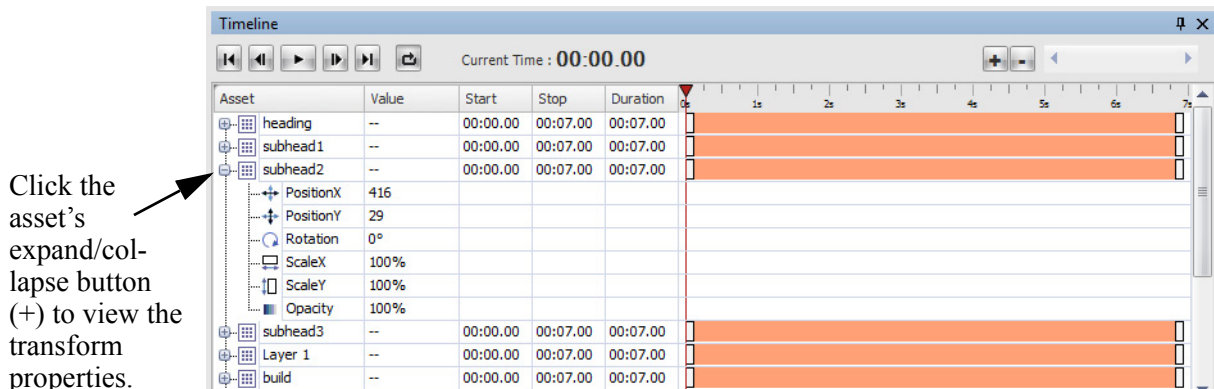
Every asset has the following transform properties:

- **PositionX** — Horizontal position of the center of the asset relative to the center of the stage (in pixels).

- **PositionY** — Vertical position of the center of the asset relative to the center of the stage (in pixels).

- **Rotation** — Rotation of the asset in degrees.

- **ScaleX** — Percentage that the asset is scaled in the horizontal dimension.

- **ScaleY** — Percentage that the asset is scaled in the vertical dimension.

- **Opacity** — Percentage of transparency applied to the asset, ranging from 0% (invisible) to 100% (fully visible).

✛	PositionX	11
✛	PositionY	-28
↻	Rotation	30°
⬜	ScaleX	100%
⬓	ScaleY	100%
▮	Opacity	100%

For some asset types, additional transform properties are available:

- **FillColor** — Color used to fill the asset. Available for shape and text assets.

- **StrokeColor** — Color used to stroke the asset. Available for shape assets only.

- **Volume** — Volume of embedded audio track. Available for video and flash assets only.

Editing Transform Properties

You can numerically edit the value of a transform property if you know the exact value you want to set.

To numerically edit the transform properties of an asset:

1. Click the Expand/Collapse (+) button to expand the transform properties for the asset.

2. Click the Value of the transform property you want to edit.

3. Type a new value into the field.

4. Press Enter or click off the field.

Interactively Editing Transform Properties

You can interactively adjust an asset's transform properties and immediately see the changes in the media window.

To interactively edit the transform properties of an asset using the mouse:

- To interactively adjust the value of a transform property, click and drag horizontally on the property name. Drag to the left to decrease the value and drag to the right to increase the value.

- You can also click and drag the asset within the media window.

To interactively edit the transform properties of an asset using the keyboard:

1. Select the transform property you want to edit in the timeline window.

2. Do one of the following to:

- Increment or decrement the value by **1**, press either the left or right arrow keys as appropriate.
- Increment or decrement the value by **10**, hold down the CTRL key while pressing either the left or right arrow keys as appropriate.

Animating the Transform Properties of an Asset

You can animate the transform properties of your assets by setting keyframes. A keyframe establishes the value of the property at a specific point in time. If you define multiple keyframes, the keyframe interpolation mode determines how the value of the property is interpolated over time — that is, how the property is animated between two adjacent keyframes. For more about interpolation modes, see "About Keyframe Interpolation Modes" on page 52.

To create a new keyframe for a transform property:

1. In the timeline window, select the transform property for which you want to set a keyframe.

2. Set the value of the transform property to the value you want the keyframe to use.

3. Position the time slider to the time at which you want to create the keyframe.

4. Right-click on the property name or in the keyframe area and choose Add new keyframe.
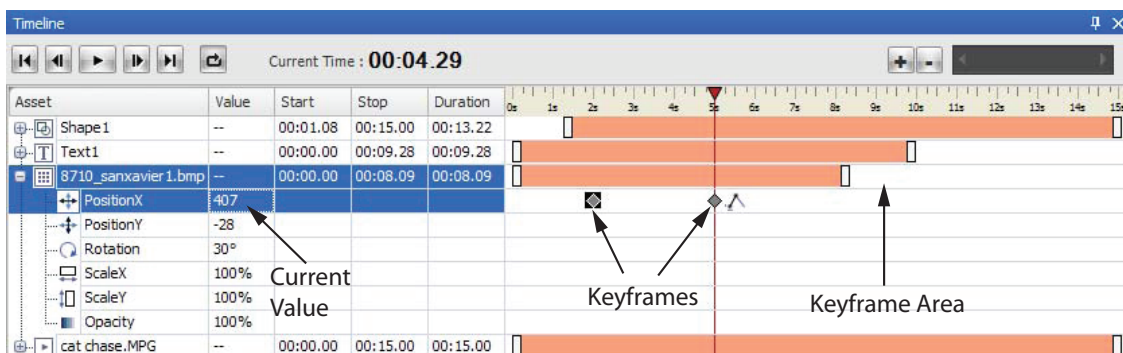
Understanding Keyframe Auto-Creation

Once you have set a keyframe for a transform property, the property is now animated. If you change the value of an animated property, one of two things can occur:

- If the time slider is set to the same time as an existing keyframe, the value of that keyframe is updated to reflect the new transform property value.

- If no keyframes are defined for the current time of the content, a new keyframe is automatically created with the transform property value at the current time.

Editing Keyframes

You can edit the value of an existing keyframe, move the keyframe in time, or delete keyframes.

To edit the value of an existing keyframe manually:

1. Set the time slider to the same time as the keyframe.

2. Enter the desired value into the transform property.

To edit the time of an existing keyframe:

- In the timeline window, click and drag the keyframe to the new time.

To edit the value and time of an existing keyframe numerically:

1. Do one of the following:

    - Double-click on the keyframe.

    - Right-click on the keyframe and choose EDIT KEYFRAME. The Edit Keyframe dialog appears:
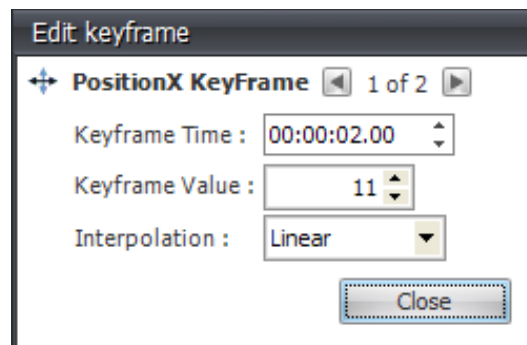
2. Edit the keyframe time, value, or interpolation mode.

    - To navigate through other keyframes without having to close the Edit keyframe dialog, use the right and left arrow buttons in the Edit keyframe dialog.

    - To select multiple keyframes in the timeline window — for example, the start and end values of the specific transform property — hold down the Shift key while selecting. You can then drag the selected values to the new location.

3. Click Close.

To delete a keyframe:

- In the timeline window, right-click on the keyframe and choose DELETE KEYFRAME.

To delete all keyframes for a transform property:

1. In the timeline window, right-click on the property name or in the keyframe area.

2. Then, choose CLEAR ALL KEYFRAMES.

About Keyframe Interpolation Modes

CoolSign Content Creator currently provides two types of keyframe interpolation modes that set how a property is animated between two keyframes:

Linear — (Default) The property changes linearly from one keyframe to the next.

Linear Keyframe Interpolation   Hold Keyframe Interpolation
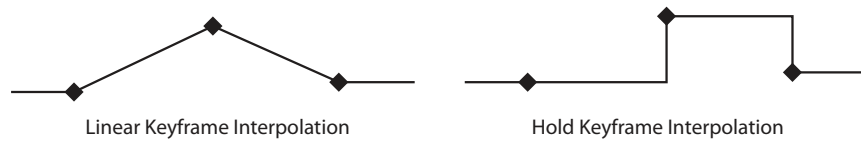
Hold — The property holds at the first keyframe and immediately pops to the second keyframe value.

Interpolation Mode = **Linear**

Keyframe 1 ....▶ Keyframe 2

Interpolation Mode = **Hold**

Keyframe 1 ....▶ Keyframe 2

To edit the keyframe interpolation mode:

1. Do one of the following:
   • Double-click on the keyframe.
   • Right-click on the keyframe and choose EDIT KEYFRAME.

2. Select a new interpolation mode.

3. Click Close.

Setting Post-Interpolation Modes

By default, when you set keyframes for a property of an asset, the value of the last keyframe is held throughout the remainder of the content. There are a number of alternative post-

interpolation modes that you can set to define how animation is interpolated after the last keyframe. The following post-interpolation modes are available:

Hold (Default) — The value of the last keyframe is held constant.
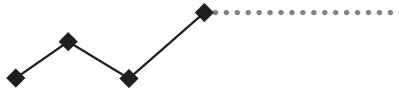
Extend — Extrapolate the slope between the last two keyframes so that the value continues at the same rate.
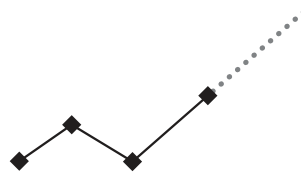
Mirror — Loop back and forth through all the set keyframes.

Cycle — Loop forward through all the set keyframes from the beginning.

Using Templates

Creating a template

Templates are a new feature in CoolSign. Consequently, you will need to create a new project to specify that it is a template.

Templates can only be created using the CoolSign Content Creator. A template is basically a standardized layout that can be modified in only a specified manner. In CoolSign Content Creator, the Content Designer uses a data table and data table elements to specify what can be modified. Once the template has been created, the Content Designer publishes it to the CoolSign Content Creator and it is available for use in the web-based interface under the Templates tab.

To create a template:

1. Create a new project, and select TEMPLATE for the Project Type.
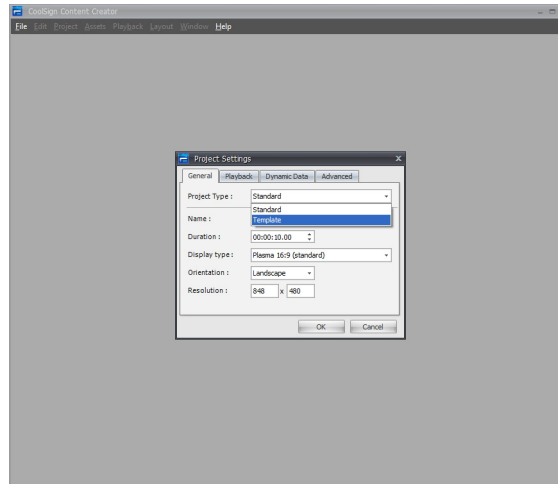
2. Fill out the remaining project settings as you would normally.

3. When the project workspace opens, create the content that you want. See "Importing Assets into Content Creator" on page 25.
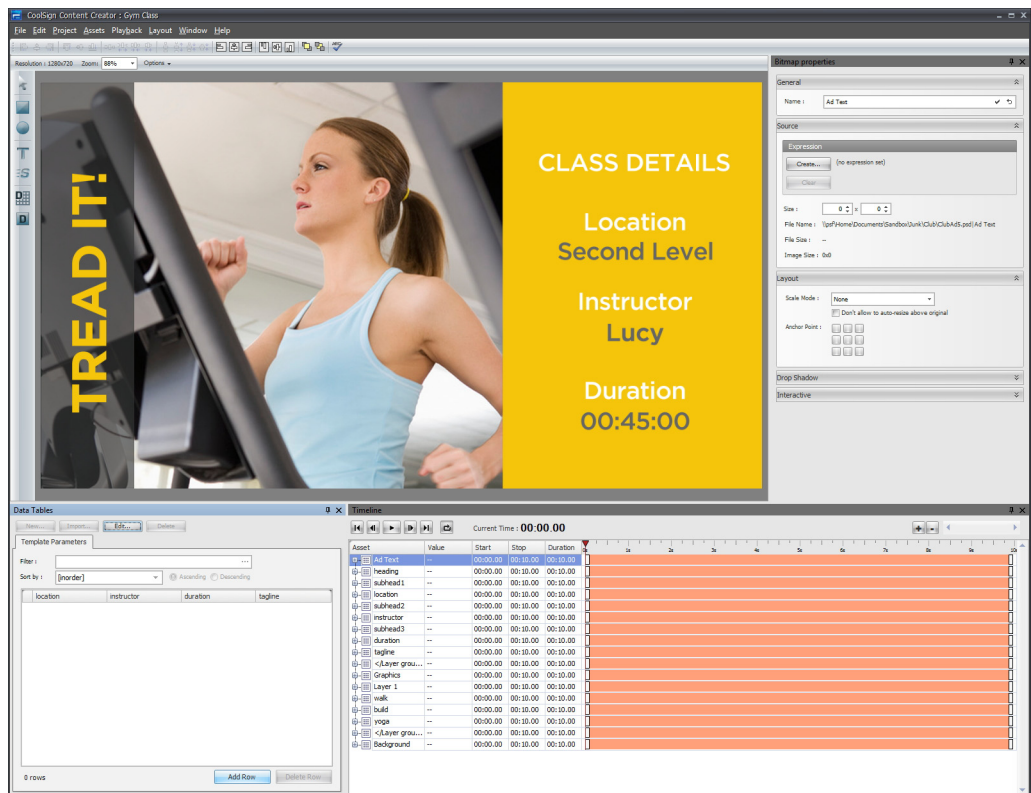
4. Next, create a data table with data fields for the content elements that you want to be able to edit in the template. See "Using Data Tables" on page 56 and "Using Dynamic Data in Your Content" on page 70 information on this.

IMPORTANT

If you imported Photoshop asset that included layered elements that you want to replace with a dynamic data field so that it is editable, you will need to locate the layer element in the Timeline window, click the + to open the element's properties and set the Opacity to 0%.
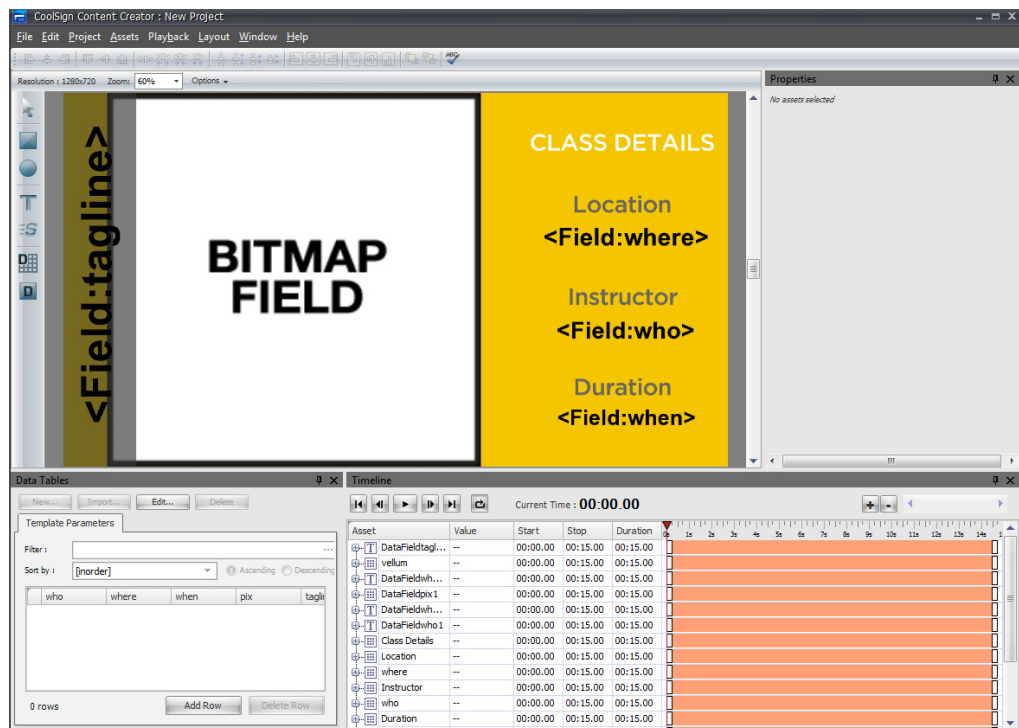
5. The data fields are bound with expressions to the data table. Refer to "Writing Content Creator Expressions" on page 80 for more information.

6. When finished, click FILE > PUBLISH TO NETWORK...

7. When prompted, click OK.
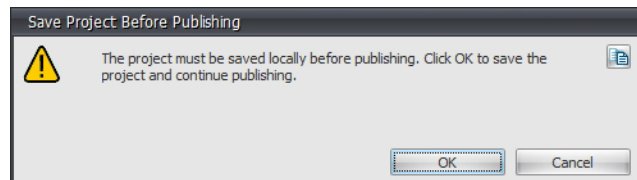
8. The CNM login screen appears, log in so that the content can be published.

9. When the files have been transferred, you can click the Templates tab in the web-based user interface (WUI) to verify that your template is available.

Using Data Tables

One of most powerful features in CoolSign is the ability to have your content dynamically display information pulled from CoolSign data tables. The CoolSign Content Creator includes specific tools for integrating your content with dynamic data. You can use dynamic data features to create content that displays product pricing, weather reports, stock quotes, sports scores and more. Data from a CoolSign data table can be displayed in a text field or you can display images or movies imported into a data table. You can also write expressions that drive the properties of an asset based on dynamic information — for example, setting the height of a thermometer graphic in a weather ad or changing the color of text based on the data displayed.

Understanding Data Tables

In CoolSign, dynamic data is stored in data tables. Data tables can store text, numbers, dates, and media files like images and video. Content Creator lets you define your own data table structure, or you can import a data table from CNM. Once your data table structure is defined, you can enter sample data into the data table so you can preview what your content will look like.

> **NOTE**
> When you subsequently import the content into CNM, only the structure of the data table is imported; none of your sample data is filled in. You must use CNM to populate the data tables with the actual data.

Understanding Data Fields

In order to show dynamic data in your content, you need to create data fields for the data to be displayed in. Data fields are bound to the data in a CoolSign data table with binding expressions. Binding expressions are automatically generated when you create a data field, but they can be edited or created from scratch for more complicated bindings. A data field can either directly display the text from a data table or it can display an image or other media asset that the data table contains.

Using the Data Tables Window

The Data Tables window enables you to manage the data tables in your content. You can add a new empty data table to your project with no fields or sample data. You can then define fields and add sample data. When you import your content into a CoolSign network, the data table is automatically created and bound for you. For more details, see:

- Create a data table (page 56)
- Edit data table properties (page 65)
- Enter sample data into your data table so you can preview how your content looks when played back (page 67)

Creating a Data Table

To add a new data table to your project:

1. In the Data Tables window, click **New...**
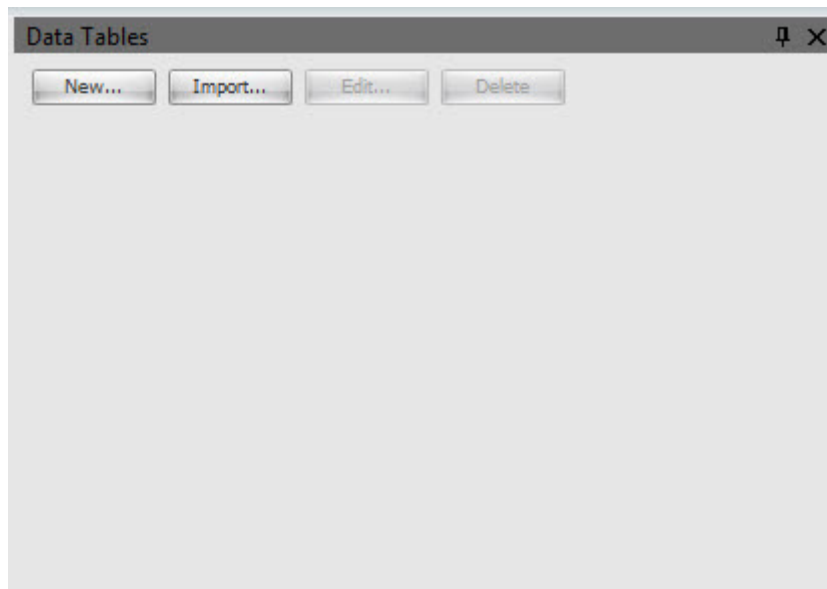
The Data Table dialog opens.
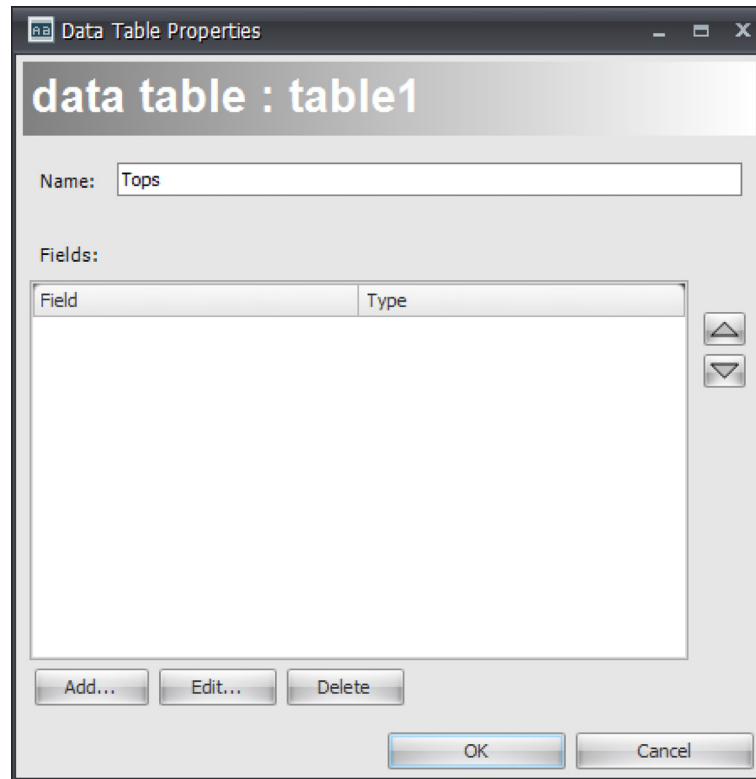
2. Enter a name for the new data table.

3. To add a field to the new data table, click Add.

The Field Properties dialog appears:

Enter the name for the field.

Select the type of field.

Set the default value for new rows.

Set constraints on how data can be entered into the field.
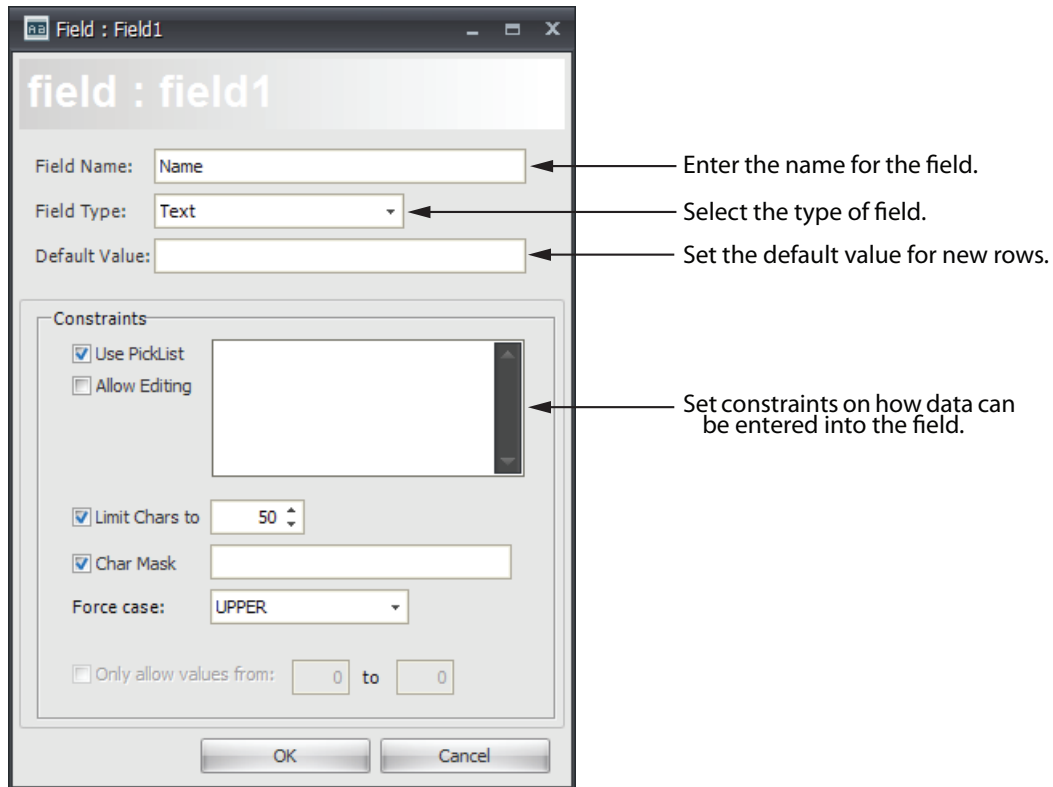
4. Enter the name of the new field in the Field Name text box.

5. In the Field Type combobox, select the type to restrict entry to the field. You can choose one of the following field types:

> **NOTE**
> See "About Character Masking" on page 64. for a list of metacharacters, special characters, and literal characters that can be used when restricting field entries.

Text — Enables any alphanumeric characters, including the letters A-Z (upper and lower case) and number 0-9. Used for basic or European text.

Number — Enables numeric entry using a spin edit control.

Boolean — Enables boolean entry of True/False.

Date & Time — Enables both date and time entry.

Date — Enables date entry using a date/time picker control.

Time — Enables time entry using a time control.

Media — Enables import of an image, movie, or flash media asset.

Long Text — Enables memo-style text entry for long fields.

International Text — Enables text that is not European. This refers to UTF-8 support (8-bit UCS/ Unicode Transformation Format). UTF-8 is a variable-length character encoding for Unicode. It is able to represent any character in the Unicode standard, yet is backwards compatible with ASCII.

6. In the Default Value text box, enter the default value to use when a new row is added to the data table.

7. Set any desired constraints on what can be entered into the data field:

Use Picklist (Text only) — Displays the text field using a combobox where you can select from a list of pre-defined values. You can enter one or more pre-defined values in the picklist text box separated by carriage returns.

Allow Editing (Text only) — Enables you to enter custom values in addition to the values available from the picklist option.

Limit Chars (Text only) — Limits the maximum number of characters that can be typed into a text field.

Char Mask (Text only) — Restricts which characters can be entered into a text field.

Examples:

1. A mask for entering a telephone number: (000)000-0000.

Each zero (0) metacharacter in this mask requires a numeric character in the corresponding position. No characters can be omitted. Note that the "-", "(and)" characters in the mask are literals.

Following are images of an editor that uses this mask:

| (___) ___-_____ | (a value is not entered) |

| (503) 555-1234 | (a value is entered) |

2. A mask for entering a telephone number with an optional area code: (999)000-0000.

The "9" metacharacter enables you to omit the area code part of a phone number.

| (___) 555-1234 | (a valid phone number without an area code part) |

3. A mask for entering an alpha-numeric sequence: \A>LL-00.

The "\A" stands for the literal character "A". Since "A" is used as a metacharacter, the backslash must be used to make "A" appear as a literal. The ">" command specifies that the following text should be in uppercase. The "LL" substring indicates that two alphabetical characters should be inserted in this position. The "00" substring is a placeholder for two digits.

A__-__   (a value is not entered)

ASD-88   (a value is entered)

Force Case (Text only) — Forces the case of all characters to either upper or lower case.

Only allow values from (Number only) — Enables setting the minimum and maximum value of a number field.

Media Type (Media only) — Sets the type of media that can be imported into a media field.
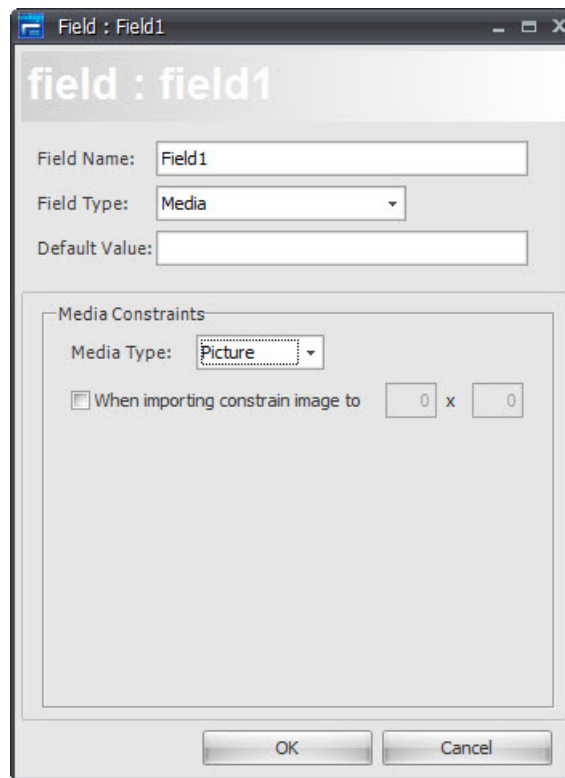
Image Constraint (Media only) — When checked, importing images display a special dialog that can be used to crop and scale the imported image to fit the defined resolution.

When checked, causes a dialog to appear when you import an image, giving you the opportunity to crop and scale.
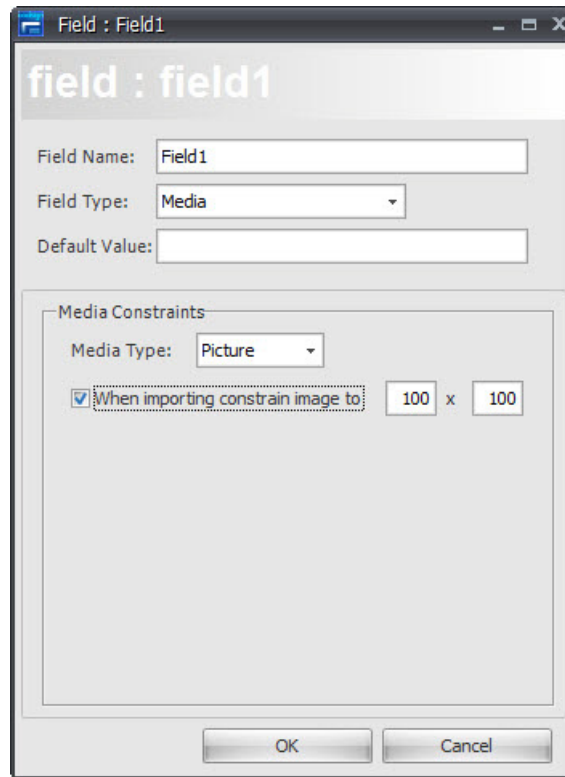
8. Click OK.

9. To add another field, repeat steps 3. through 8.
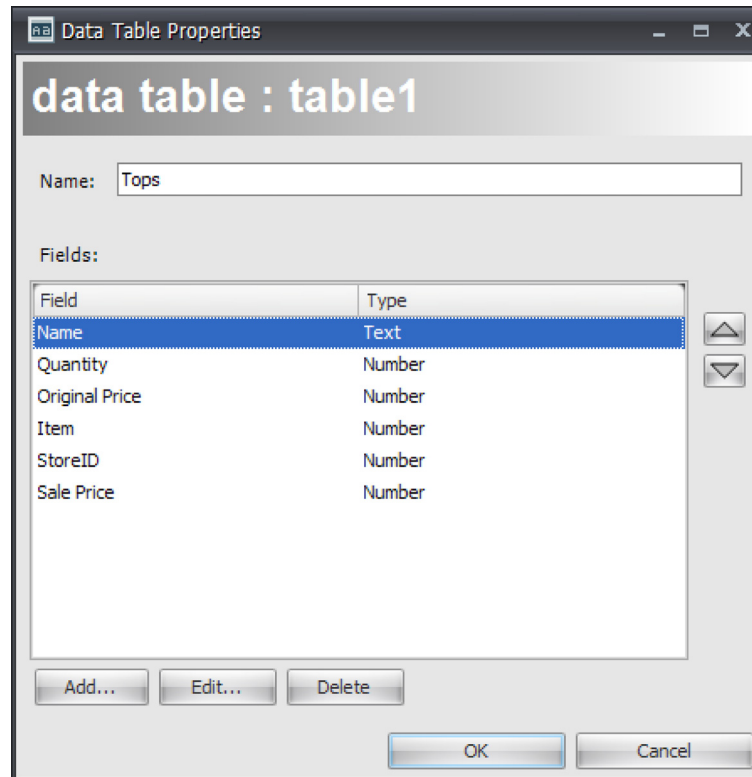
10. When you're done, click OK to close the Data Table Properties dialog. The Data Tables window now includes the fields that you've just added.

You can now:

- Import a data table from a CoolSign network (page 65).

- Create a filter expression on your data table to limit the records to display (page 65).

- Set the sorting order in which data from the table is displayed (page 67).

- Populate the data table with sample data so that you can preview how your content looks like when actually playing (page 67).

To edit a data table structure:

1. In the Data Tables window, click **Edit...**

2. Add new fields or delete fields as desired.

NOTE
You can also modify existing data structure elements (such as the data table name and data fields).

3. Click OK.

> **NOTE**
>
> For detailed information about the available properties and data table field settings, see "Creating Data Fields" on page 70.

About Character Masking

Metacharacters—used to represent a range of symbols. You can enter text only in the positions that correspond to metacharacters. When a metacharacter is found at a specific position in the mask you can enter any character from the related range in this position in the edit box. The following table lists the available metacharacters:

Character	Meaning
L	Requires an alphabetic character in this position. For the United States, this is A-Z, a-z.
l	Permits only an alphabetic character in this position, but doesn't require it.
A	Requires an alphanumeric character in this position. For the United States, this is A-Z, a-z, 0-9.
a	Permits only an alphanumeric character in this position, but doesn't require it.
C	Requires an arbitrary character in this position.
c	Permits an arbitrary character in this position, but doesn't require it.
0	Requires a numeric character in this position.
9	Permits only a numeric character in this position, but doesn't require it.
#	Permits only a numeric character or a plus or minus sign in this position, but doesn't require it.

Special Characters—used to control the case of the input string and to represent various delimiters and currency symbols.

Character	Meaning
>	If a > character appears in the mask, all the characters that follow it are in upper-case until the end of the mask or until a < character is encountered.
<	If a < character appears in the mask, all the characters that follow it are in lower-case until the end of the mask or until a > character is encountered.
<>	If these two characters appear together in a mask, no case checking is performed and the data is formatted with the case you use during data entry.

/	A / character is used to separate the months, days, and years in dates. If the character that separates the months, days, and years is different in the regional settings of the system that the application runs on, that character is used instead.
:	A : character is used to separate the hours, minutes, and seconds in time values. If the character that separates the hours, minutes, and seconds is different in the regional settings of the system that the application runs on, that character is used instead.
$	A $ character is used to designate currency values. If the character that designates the currency values is different in the regional settings of the system that the application runs on, that character is used instead.

Literal Characters —A character that is neither a metacharacter nor a special character is called a literal. Literals are inserted automatically as is into the edit box in their positions defined by the mask. There is no need to enter literal characters, the cursor skips over them during editing.

> ### NOTE
> Metacharacters and special characters can also appear as literal characters if they are preceded by a backslash (\).

Importing a Data Table from a CoolSign Network

If the data table for which you are creating content already exists, you can import it from a CoolSign network instead of creating it from scratch. This is especially useful if the content you are creating is bound to a data table that is created by an external data source like the CoolSign DataFeed or DataWatcher. When you import a data table, its current data values are imported as sample data.

To import a data table from a CoolSign network:

1. In the Data Tables window, click **Import...**

2. If you haven't yet connected to a network, the standard CNM login dialog appears.

3. Select the data table you want to import from the list of available data tables.

4. Click OK.

Filtering Your Dynamic Data

Often, you'll want to filter which rows in a data table that appear in your content. You can create a filter expression on your data table to limit the records to display.

To display the Set filter dialog:

1. In the Data Tables window, select the Properties tab for your data table.
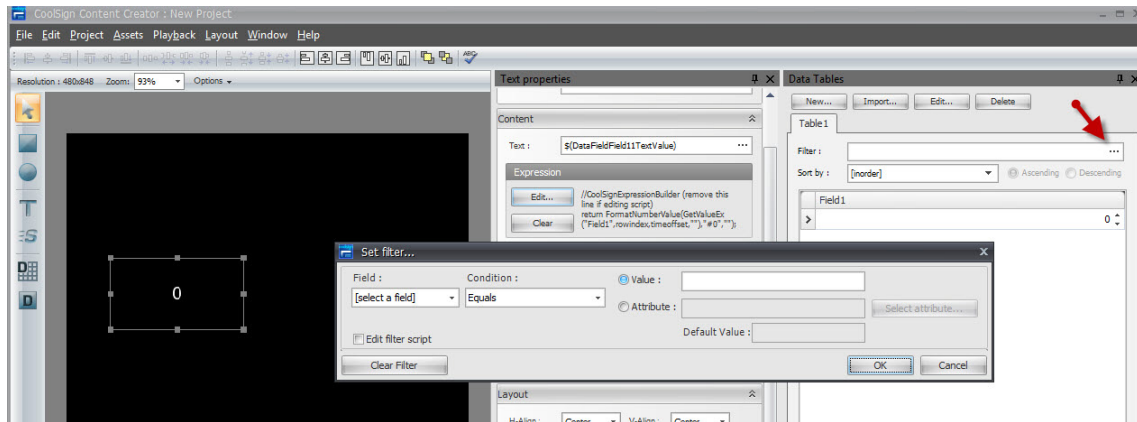
2. Click the ellipses (...) button to open the Set filter dialog.
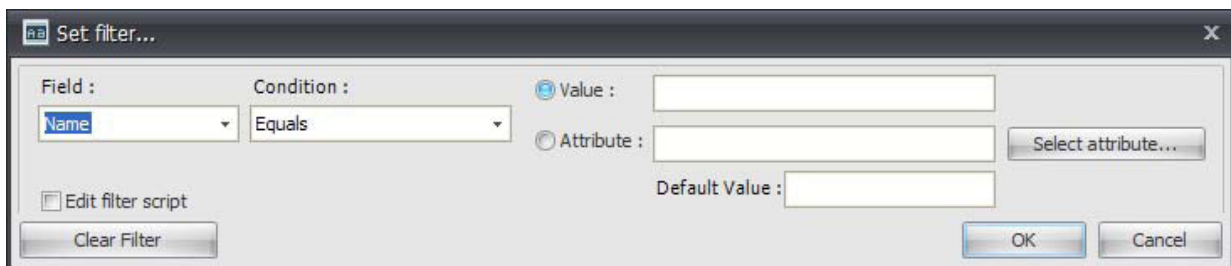
Field — Select the field from your data table that you want to use in your filter criteria.

Condition — Select the condition that you want to use to compare the selected field against the criteria.

Value — You can manually enter a value to compare a field against.

Attribute — If you want to filter against an attribute of the node on which the content is playing, you can either enter the attribute name into the Attribute text box or you can click Select attribute to connect to a CoolSign Network and choose an attribute that exists on that network. Filtering against an attribute is useful when you want to localize the dynamic data in your content.

Default Value — If you've selected to filter against an attribute, you can enter the value of the attribute for previewing within the Content Creator. When your content is played back on a CoolSign player, the filter uses the value of the attribute for that player.

Edit filter script — By default, this dialog opens with a simple interface that enables you to define your filter criteria. For more advanced filter expressions, you can check this box to display a field into which you can directly type a JavaScript filter expression.

Clear Filter — Click this button to reset your filter to display all available rows.

Sorting How Your Data Displays

From the Data Tables window, you can set the sorting order in which data from your data table appears. This is useful when you are displaying data using a table-like format or if your content is looping to show multiple rows of data. There are two special sort orders:

InOrder — No additional sorting is applied to the data.

Shuffle — Rows are sorted randomly each time the content plays.

To sort your data based on a specific column, click the column header (or select the column from the Sort by menu).

You can also click the Ascending or Descending radio button to determine the sort order.
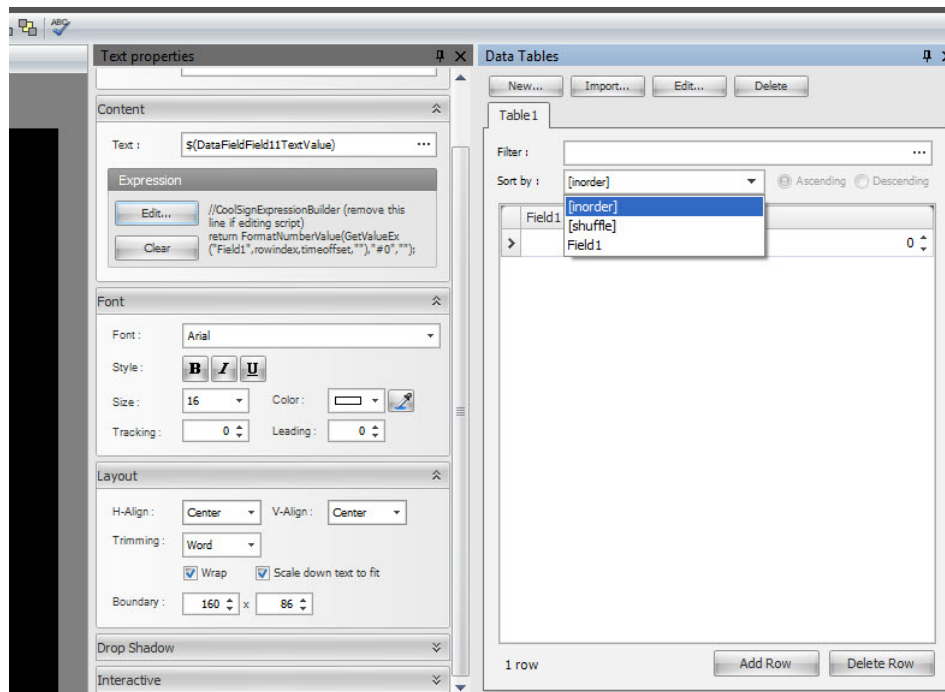
Entering Sample Data Into Your Data Table

You might want to preview your content with sample data in the data table so you can see what it looks like when actually playing and to make sure that your design supports the different data that can be entered.

To add a new row to the sample data:

1. In the Data Tables window, click Add Row.
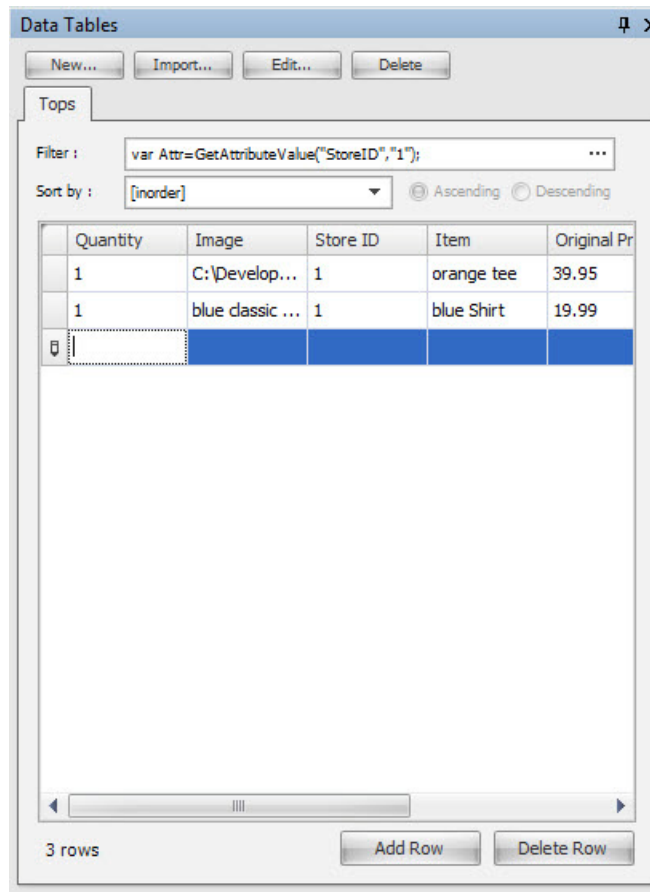
2. Click in the column and row you want to edit.

3. Do one of the following:
   - Type a new value.
   - Use the column editor controls to edit the field value.

     For example, use the column editor controls to edit an image field. When you de-
     fine a data table field (such as the quantity) you can add a field and set it to each
     field type, which might have a column editor associated with it. If you create a
     field date and time field and then add a value, you get a drop down menu column
     editor that shows you a calendar. Once you create a field you'll see the column
     editor controls associated with that field.

To delete a row from the sample data:

1. Select the row you want to delete by clicking in any field.

2. Click Delete Row.

Ordering Your Sample Data

Every data table has a special ordering index field that determines the order of a row within the data. By default, the ordering field is not visible.

To display the ordering field:

1. In the data table's sample grid, right-click anywhere to display the popup menu.

2. Select Show Ordering to toggle the visibility of the ordering field.

Printing Sample Data

You can print your sample data or save it to PDF or graphic files. To do so, choose Print Data from the sample grid's pop up menu.
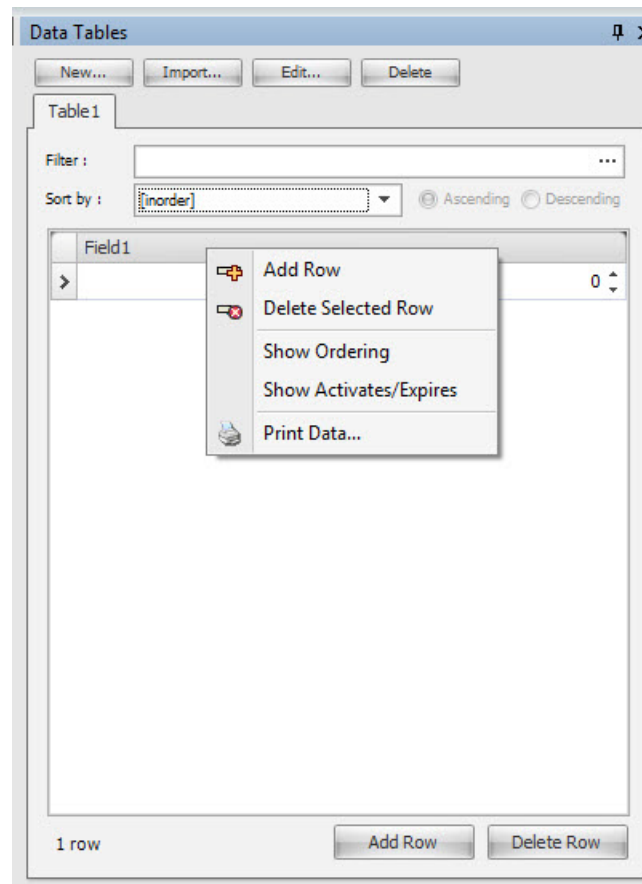
Using Dynamic Data in Your Content

You can use data from a data table in your content in either of two ways: data fields or property expressions.

Creating Data Fields

As described previously (page 56), a data field can either directly display the text from a data table or it can display an image or other media asset that the data table contains.

To add a data field to your content:

1. Select the data field tool from the toolbar.

2. Click and drag in the media window to lay out the position and size of the data field.

3. If you have not already added a data table to your project, the Create DataTable dialog appears, prompting you to create a new data table or import an existing data table from an available CoolSign network (see "Using Templates" on page 53).

4. After creating a new data table, or if a data table already exists in your project, the New Data Field dialog appears:
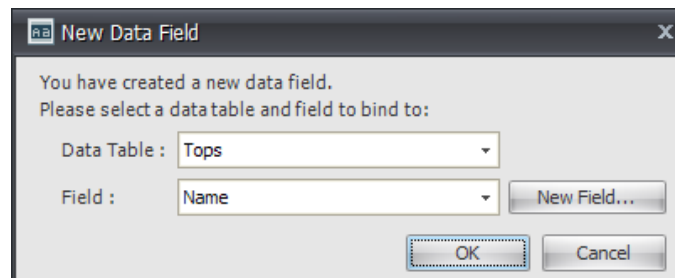
5. Do one of the following:

    •   Select a field from the field list.

    •   Click New Field to create a new field in the data table.

6. Click OK. If the field you selected is a media field, a media data field is automatically created; otherwise, a text data field is created.

Viewing Sample Data in Your Data Fields

If you've entered sample data into your data table, that data is used to populate your data fields using whatever filter and sort properties you might have set. If there is no sample data in your data table, or if your filter expression does not return any data, the data field displays the name of the field it was bound to.

Editing Expressions

When you create a data field, a binding expression is automatically generated for you that links the data field to a value in a data table. You can edit the expression for a data field or add a new expression for a text field with the Edit Expression dialog.

To edit the expression for a data field or text field:

1. Select the data field or text field in the media window or timeline to display the asset's properties window.

2. In the Properties window, click **Edit expression...**
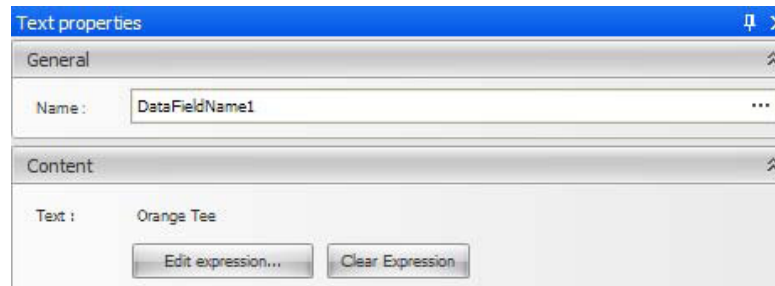
3. The Edit Expression dialog appears:
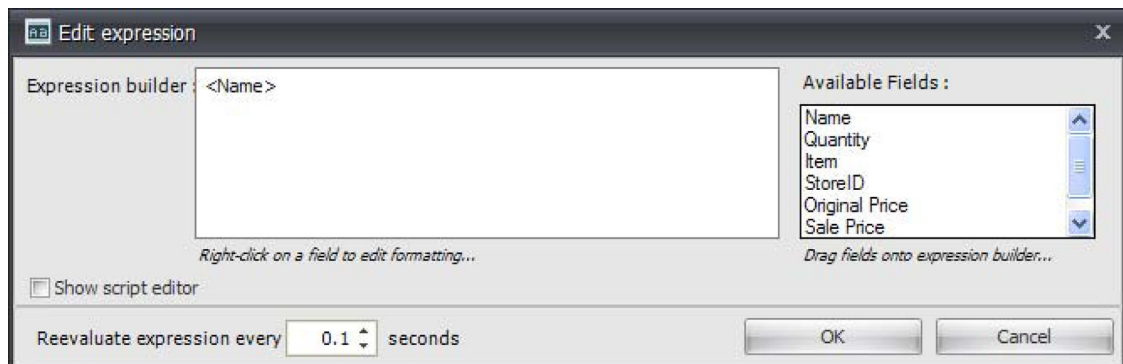
You can use the expression builder to lay out the text as it should appear in your data field, concatenate multiple fields together, and format date/time or number fields.

Expression builder — You can edit the expression builder to add additional text or special characters into your expression. For example, if you type an exclamation point after the bound field (indicated by the field name in angle brackets), then an exclamation point is always added in the data field regardless of what is typed into the data table.

Available fields — All the fields from your data table and any special system fields are listed here. You can drag a field from the list into the Expression builder to add it to your expression. You can use this functionality to display multiple fields within your data field. For example, you might have a FirstName and a LastName field that you want to display together in a single data field.

Show script editor — Check this box to edit the actual JavaScript used for the expression. You can enter more complicated expressions this way.

Reevaluate expression every X seconds — Specifies how often the expression should be re-evaluated and updated. Set to zero if you want the expression to only be evaluated once when the content starts playing. When you add an asset to a ticker, its expression evaluation frequency is set to "-1", which means that the expression is evaluated once for each row of data in the ticker.

Formatting Expression Results

You can define some special formatting settings for the value that is returned by your expression, including a default value for when no data exists and whether to force the data to upper- or lower-case.

If your data field or expression returns a number or date/time value, you might want to format how that value appears in the data field. The Content Creator provides a large set of pre-defined format types for numbers and date/time values or you can create your own custom formats.

To customize how the data in a field is formatted:

1. Right-click on the field in the Expression builder to display the popup menu.

2. Select **Format field...** to display the Set Formatting dialog:
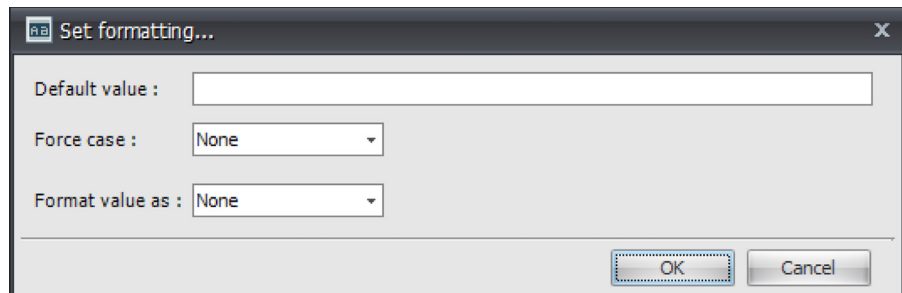
Default value — Specifies the value to display when there is no data in the bound field. For example, you might want to show blank records with "--" or "NoData" instead of just a blank field.

Force case — You can use the pull-down menu to force the case of the data in a field to all upper-case or all lower-case.

Format value as — Specifies how to format the value of the field. When you select a format type other than None, the data format styles are shown. You can either select a pre-defined format from the list or enter a custom format. For example, if you select DateTime, the following Date format styles appear:
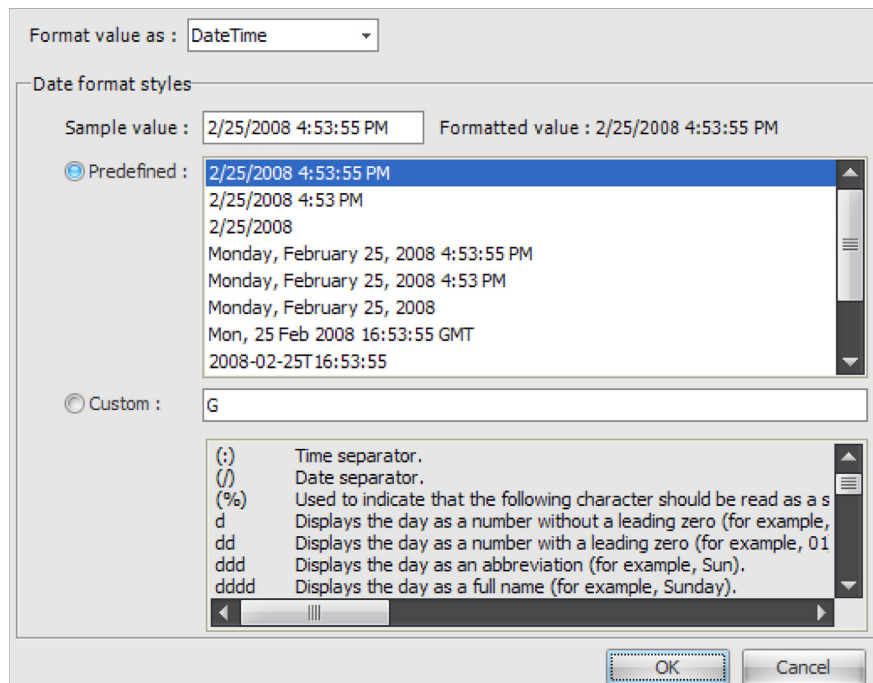
Using Data Panels

A data panel is a special grouping of data fields that can be used to aid when creating content that displays multiple rows of data in a table-like format. For example, if you are creating content that appears in multiple rows of data from a sports score data table, it would be very tedious to have to add a data field for each field and row you wanted to display. Data panels enables you to set up one panel of data fields and then specify how many duplicates should be created. You have total design freedom to lay out the fields in your data panel however you'd like. You can even animate the data fields in a data panel.

To add a data panel to your project:

> **ⓘ NOTE**
>
> First, design the data panel that you'll create. This simplifies the task of subsequently populating the data panel.

1. If you have not added a data table to your project, use the Create DataTable dialog to create a new data table or import an existing data table from an available CoolSign network (see "Using Templates" on page 53).

2. Select the data panel tool from the toolbar.

3. Click and drag in the media window to position and lay out the panel.

4. Indicate whether you are creating a new table or importing an existing table:

5. If this is a new table, give it a name:
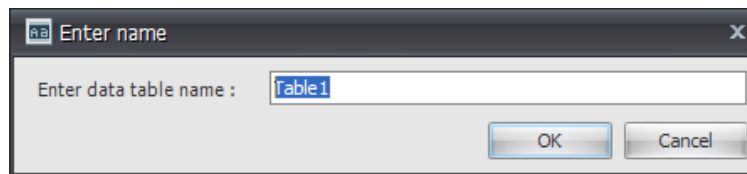
6. Verify that the data panel is selected in the media window.

7. Select the data field tool from the toolbar.

8. Click and drag inside the data panel in the media window to position the data field. You can subsequently resize or rearrange the data fields.

9. When you've finished positioning your new data field, the New Data Field dialog appears:
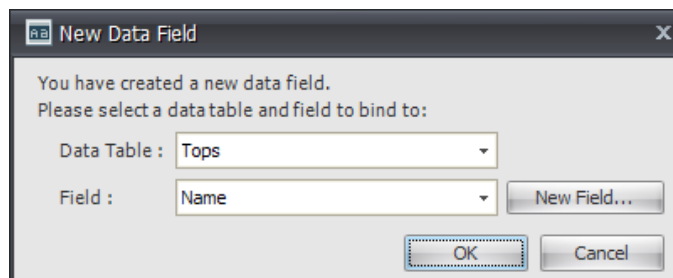
10. Choose the data table that is bound to this data panel.

11. Do one of the following:
   - Select a field from the field list.
   - Click New Field to create a new field in the data table.

12. Click OK.

13. To add another field to the data panel, repeat steps 6 through 12. Once you've added fields to your data panel, you can set the properties for the data panel:
   - General data panel properties (page 76)
   - Layout properties (page 76)

- Data properties (page 76)

Editing Data Panel Properties

You can edit data panel properties from the DataPanel properties window:
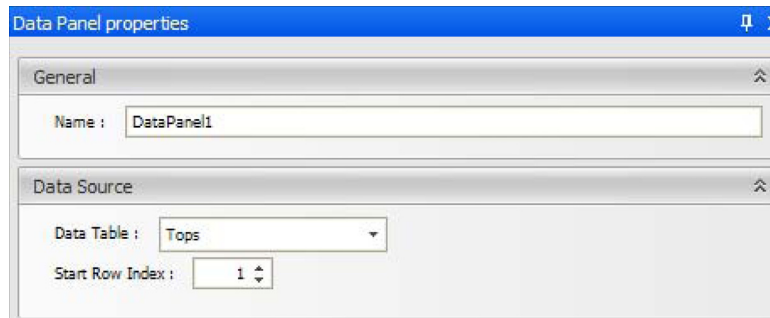
Name — Specifies the name of the data panel.

Data Table — Specifies which data table is bound to the data panel.

Start Row Index — Sets the index of the row of data to display in the first row of the data panel.

Setting Data Panel Layout Properties

Once you've added fields to your data panel, you can use the data panel layout properties to create additional rows and columns of fields. Use the data panel option to display one or more data field values. Use the data layout properties to display more than one row.

> **NOTE**
>
> The only way to add a data field within the data panel is by creating the data field inside the data panel. Rows are top to bottom and columns are side by side.

Rows — How many rows of data panels to display.

Cols — How many columns of data panels to display.

Spacing — How many pixels each row or column should be offset.

Flow Direction — How records should flow into the rows and columns of data panels.

Child Animation Offset — The number of seconds that is used to offset any animated data fields in each data panel. You can use the timing offset property to stagger the animation of data fields so that each row animates one after another or overlapping.

You can only interact with the first row of a data panel in media window. When you transform the data panel by repositioning it or resizing it, all other data panel rows snap to match. If you add additional data fields to the data panel or remove fields, all other data panel rows synchronize to match.

Setting Data Properties

When your data table has more rows of data than you can display at once in your content, you can use the data properties to define what should happen. For example, you might have designed content to display a list of menu items for a restaurant, but you can only fit five items on the screen at a time. The data properties determine what to do if there are more than five menu items in the data table.
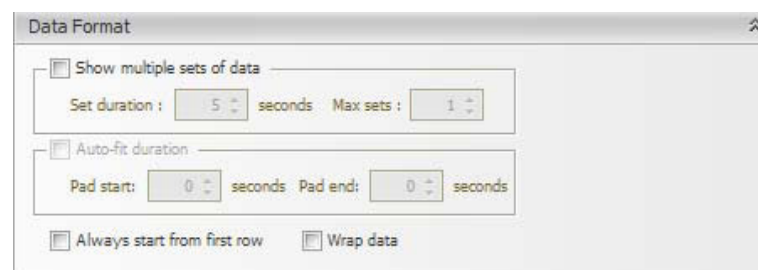
Show multiple sets of data — When checked, this data panel is enabled to show multiple sets of rows during a single iteration of the content. Otherwise, the data panel does not advance beyond the selected rows in the data table until the next time the content plays.

Set duration — How long to wait before the data panel displays the next set of rows in the data table. The duration also appears in the timeline for the data panel as a green timeline bar. You can also adjust the duration by interactively adjusting the data panel's timeline bar.

Max sets — The maximum number of times that your content can loop to display multiple sets of data. The data panel never shows more rows than exists in your data table, but you can define a maximum number of sets in case you don't want to loop through all the rows in a data table.

Auto-fit duration — When checked, your content automatically adjusts its duration to fit the number of rows that appear. This is extremely useful when you don't know beforehand how many rows of data are going to be in the data table, but want to ensure that your content plays as long as necessary to show all the rows.

Pad start, Pad end — When Auto-fit duration is checked, you can also add an addi-

tional pad to total duration of the content in case you want to display the final data row(s) for a longer period.

Always start from first row — When this box is not checked, the content remembers the last row that appeared the last time the content played, and begins with the next row in the data table. When this box is checked, the display always begins with row one in the data table.

Wrap data — When this box is checked, if there are fewer rows in the data table than there are in the data panel, the remaining rows of the data panel begin again with row one of the data table. Otherwise, the data panel is truncated after the last row of the table appears.

Adding Expressions to Transform Properties

In addition to setting binding expressions for data fields, CoolSign Content Creator also enables you to create expressions for the transform properties of any asset. You can use transform expressions to dynamically set any transform property including position, scale, rotation, transparency, or color. When an expression is set for a transform property, the return value of the expression determines the value of the property. Properties with expressions cannot be modified interactively via the media window or timeline window value editor. For more information on writing expressions, see "Writing Content Creator Expressions" on page 80.

To set an expression on a transform property:

1. Select the transform property of the asset you want to set an expression for.

2. Right-click and choose Edit Expression from the pop-up menu.

3. Enter the expression into the Edit Expression dialog.

4. Click OK.

To clear an expression from a transform property:

1. Select the transform property.

2. Right-click and choose Clear expression.

4. Using Expressions

Topics Discussed

Writing Content Creator Expressions

All expressions in CoolSign Content Creator are written in JavaScript. There are numerous books and websites with information on programming in JavaScript. CoolSign Content Creator only processes "safe" JavaScript commands, so expressions cannot create windows, access the filesystem, or perform any other unsafe functions. When you are writing either a binding or transform expression, your expression is treated as a function and must return a string value as its final action. You are free to add any necessary logic or processing to derive the value that your expression returns and you can even have multiple functions defined within your expression.

Special Content Creator Functions

The Content Creator defines a number of special functions to make accessing data from data tables simpler from a binding or transform expression. These functions exist in the content's global expression.

> **NOTE**
> While it is possible to edit the global expression, doing so might make the content unreadable to Content Creator so proceed at your own risk.
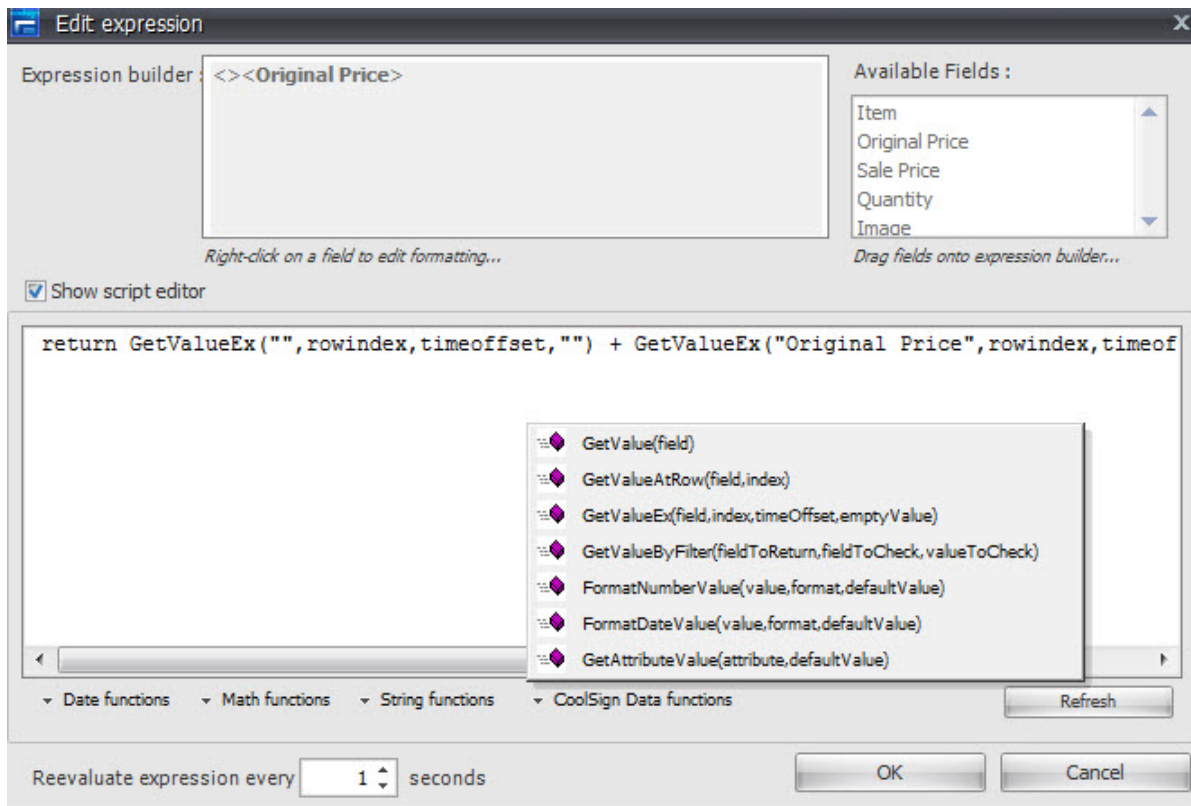
The following special functions are defined:

- Function **GetValue** (field)

  - Returns a string value from the data table for the given field of the data table. If the field name does not exist in the data table, the default value parameter is returned.

- Function **GetValueAtRow** (field, index)

  - Returns a string value from the data table for the given field and row index of the data table. If the field name or row index does not exist in the data table, the default value parameter is returned.

- Function **GetValueEx** (field, index, timeOffset, emptyValue)

- Function **GetValueByFiltered** (fieldToReturn, fieldToCheck, valueToCheck)

  - Returns a string value from the data table for the given field and row index of the data table. If the field name or row index does not exist in the data table, the default value parameter is returned.

- Function **FormatDateValue** (value, format, defaultValue)

  - Returns a date field from the data table formatted using the format parameter.

- Function **FormatNumberValue** (value, format, defaultValue)

  - Returns a number field from the data table formatted using the format parameter.

- Function **GetAttributeValue** (attribute, defaultValue)

  - Returns the value of the attribute for the player on which the content is currently playing. If the attribute does not exist, the default value is returned.

5. Publishing Content

Topics Discussed

Publishing Content to a CoolSign Network

To publish content from CoolSign Content Creator to the CoolSign network, select the menu item FILE > PUBLISH TO NETWORK. If you haven't already saved the project locally, you'll be prompted to do so before you can publish the project.

To publish content from the Content Creator, you must have Write Content capability. For details, see the "About Security" section of the *CoolSign Network Mangager User's Guide*.

When the CNM login dialog appears, enter your username and password and select the CoolSign network where you wish to import the content.

IMPORTANT
If the content already exists on the network, it is overwritten.

After verifying your login credentials, the Content Creator publishes the content to the CoolSign network, then disconnects you from the CoolSign network.

A. Using the CoolSign Content Wizard

The CoolSign Content Wizard guides you through a series of steps to convert your digital media assets into content that can be played back on a CoolSign Digital Media Network. At any point, you can click the Prev button to return to previous steps.

Starting the CoolSign Content Wizard

To start the CoolSign Content Wizard:

1. Browse to the CoolSign directory and open the Content Wizard folder.

2. Double-click the ContentWizard.exe to open the tool.

Converting Content

Step 1: Choose Asset(s) to Convert

Determine the media assets that you want to create into CoolSign content. You can convert a single asset into CoolSign content,configure video capture, or batch convert multiple assets.
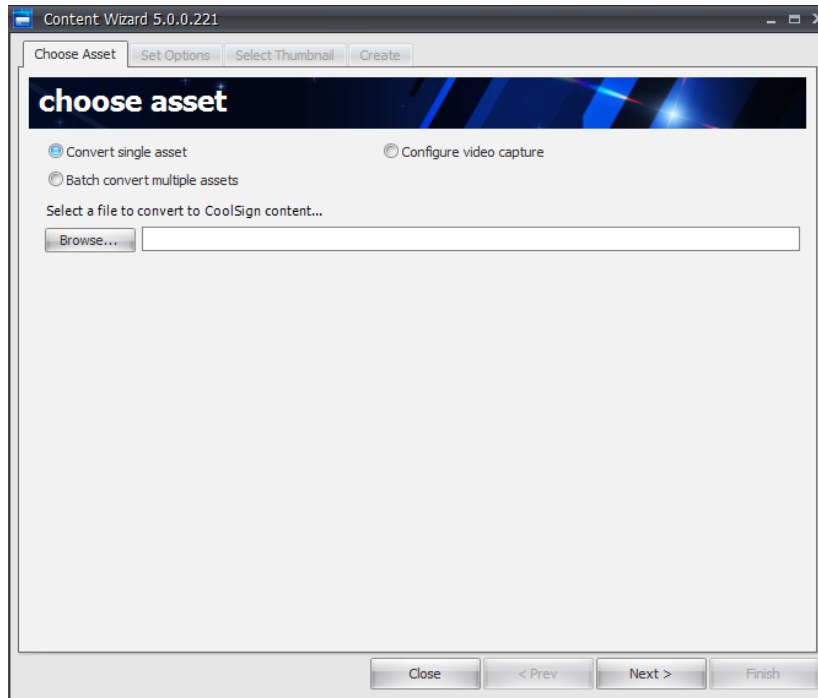
To convert a single asset into CoolSign content:

1. Select the CONVERT SINGLE ASSET radio button.

2. Click Browse to locate the asset file you wish to convert.

   If you are converting a Flash asset that needs to load external files (such as images) at run time, make sure that the external files are in the same folder as your Flash asset, or in one of its subfolders. For example:

   ```
   ContentFolder\ (root folder)
       ContentFolder\myFlash.swf (the asset that you're converting)
       ContentFolder\Image\background.jpg
       ContentFolder\Image\banner.jpg
   ```

3. Click Finish to complete the content creation process.

   The Content Wizard prompts you as to whether or not you want to include all files in the ContentFolder folder and its subfolders (in this example, `background.jpg` and `banner.jpg`). After you confirm your choice, the two image files are packaged with

the Flash asset, resulting in a single piece of CoolSign content.

> **NOTE**
>
> Do not include any unrelated files in the folder that contains your Flash assets. If the content folder (or any of its subfolders) contains any unrelated files, they are included into your content and eventually imported to the network as well.

> **NOTE**
>
> For this reason, avoid importing Flash content from the desktop. Attempting to do so causes the entire contents of your desktop to be imported as well.

To configure video capture:

1. Select the CONFIGURE VIDEO CAPTURE radio button.

2. Click Browse to locate the asset file you wish to convert.

3. Need to step through process.

To batch convert multiple assets into CoolSign content:

1. Select the Batch convert multiple assets radio button.

> **NOTE**
>
> If you select this button, you cannot include external files for a Flash asset, as described above.

2. Do one of the following:
    *   Click Add All Assets in Folder to recursively add all the assets located in a specific folder and subfolders to the batch list.
    *   Click Add Asset to add a single asset to the batch list.
    *   Click Remove Asset to remove a selected asset from the batch list.

3. When you've added all the assets you want to batch convert, click Next to proceed to the Set Options step.

Step 2: Set Options

In this step, you can set properties regarding your content and preview how your content looks on different types of displays.
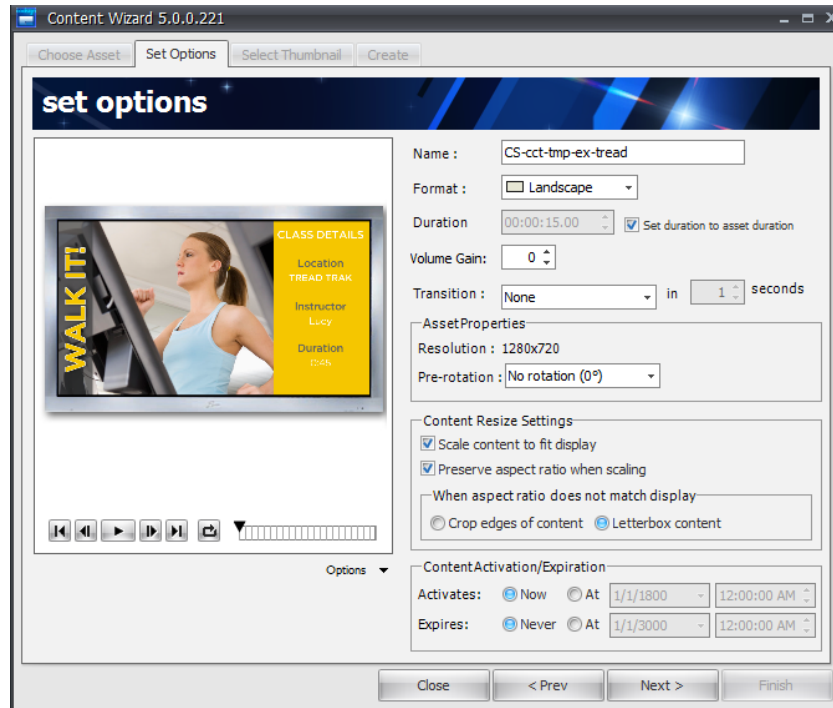
Setting Content Properties

You can set the following properties for your content:

Name—Set the name of this content as you wish it to appear in the CoolSign Network Manager. The default name is the name of the imported asset.

> ### NOTE
> With multi-file Flash assets, be sure to specify a legal folder name, so that multi-file Flash content will work properly.

Format—The format is automatically set based on the aspect ratio of the imported asset. You can change the format if the auto-detected value is incorrect. Once imported into CoolSign Manager, you can only schedule this content into channels with the same format.

Use Legacy Flash Player (enabled only for assets that are Flash 4 or earlier)—When checked, provides backward compatibility for SWF files that are Flash 4 or earlier.

Duration—You can adjust the length of time for which the content plays. If the content includes video or Flash assets, setting the duration to less than that of the video cuts off the video playing. Setting the duration to longer than that of the video asset causes the video to

hold on the last frame for the remainder of the content play. If the ☑Set Duration to Asset Duration box is checked, the Duration field is greyed out.

Set Duration to Asset Duration—This checkbox is enabled only when digital video or Flash assets are being converted. Checking this box automatically sets the duration of the content to match the duration of the imported asset.

If the duration is set to within 0.1 of a second, it is rounded off to a the nearest second. For example, if the duration is any value between 9.90 and 10.1, it is rounded to 10 seconds. This is done to avoid unexpectedly strange values in the duration field.

Volume Gain—You can use volume gain to modify the overall volume level of all video, flash, or sound assets used in the content. The value can be between -100 and 100, with 0 being the normal, unmodified volume level of the assets. You can use volume gain to normalize the volume of your content in relation to each other so that no one content item is softer or louder than the others.

Transition—You can set a transition effect and duration that is used to transition into the CoolSign content when played back.

Setting Asset Properties

Resolution—The horizontal and vertical resolution of your content in pixels.

Pre-rotation—Rotation of the asset in degrees.

Show Transparency (enabled only for Flash assets)—When checked, whatever areas of the Flash file were designated to be transparent are rendered with a transparent background. Checking this box has no visible effect if the Flash file contains no transparency.

Timeless (enabled only for Flash assets)—When set, CoolSign Player ignores the Flash asset's timeline.

Setting Content Resize Settings

Use these settings to define how the content should be displayed on players that are of different resolution than the selected content. The preview window automatically updates to reflect the content resize settings so you can dynamically preview the options. The following options are available:

- **Scale Content To Fit**—Scales content to fit the resolution of the player the content is scheduled on. If the aspect ratio of the player does not match the content's aspect ratio, the content is stretched non-linearly to fill the player unless Preserve Aspect Ratio is checked.

- **Preserve Aspect Ratio**—Forces scaled content to preserve its original aspect ratio when played on players with different resolutions and aspect ratios than the content's. The behavior of this checkbox is further defined by the following radio buttons:

  - *Crop edges of content*—When scaling to fit, the content is scaled linearly until the smaller of the content's width or height matches the smaller of the player's width or height. This can result in pixels being cropped off the edge of the player.

- *Letterbox content*—When scaling to fit, the content is scaled linearly until the larger of the content's width or height fits into the player's width or height. The empty area that remains is black.

Setting Content Activation and Expiration

Content can be set to activate and/or expire at a certain date and time.

- **Content Activation**—Restrict when content is available to start playing. Content can be scheduled at any time but if its activation date is set to something other than Now, it does not play until the current date and time is past the set date.

- **Content Expiration**—Automatically delete content after the specified date and time. Content that has expired is deleted from a CoolSign network, including any players it was scheduled on, and moved to the Content Recycle Bin. All schedule and play history is lost when the content expires.

Previewing Content

The Preview content window displays a preview of your content and how it looks on different display types.

Access the Preview Content window from the Options drop-down menu.

You can select different pre-defined display types or define your own custom resolutions. You can adjust the content's resize properties to make sure you have the correct settings to

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ensure that your content looks correct across different display types. If you didn't install Direct X, you cannot review content.

ⓘ NOTE

The Display type and Resolution settings are used for previewing only. They do not affect your content settings in any way.

To select a display to preview your content on:

1. Click the OPTIONS menu to open the Preview Options popup menu.

2. Do one of the following:

   • Select a pre-defined display type from the Display type pull-down menu. The appropriate resolution is automatically set and the preview window is updated to reflect your choice.

   • Enter custom x and y resolutions into the Resolution fields. The preview window is updated to reflect your values.

3. Use the transport buttons to control playback and looping of the content preview.

Step 3: Select Thumbnail

In this step, you can select a thumbnail image for your asset.
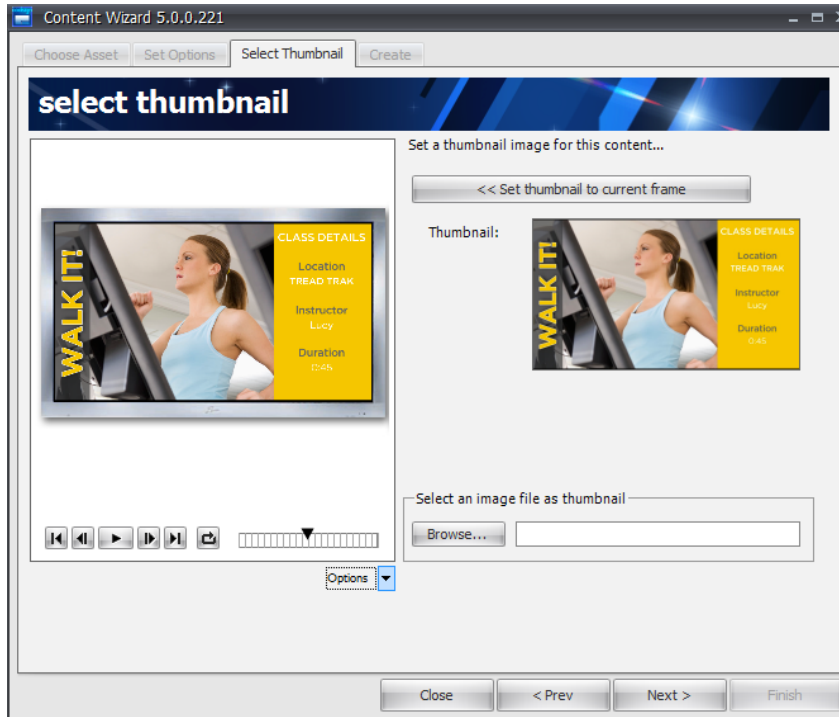
NOTE

If you are batch-converting multiple assets, a thumbnail for each content is automatically selected from a frame a few seconds from the end of the asset.

To select a thumbnail image for your content:

1. Using the content preview transport buttons or the time slider, set the preview to the frame of the asset you would like to use as a thumbnail.

2. Click Set thumbnail to current frame and the selected thumbnail image appears in the Thumbnail area.

   -or-
   Click Browse to locate an image file that you wish to use as a thumbnail for this asset. The image must be in one of the following formats: JPEG (*.jpg), Windows Bitmap (*.bmp), or Portable Network Graphics (*.png).

3. Use the Options button to preview how the thumbnail will render on a variety of monitor types at various resolutions.

   When you're done, click Next.

Step 4: Create

In this step, you set the destination folder where your converted CoolSign content should be saved, along with some other settings.
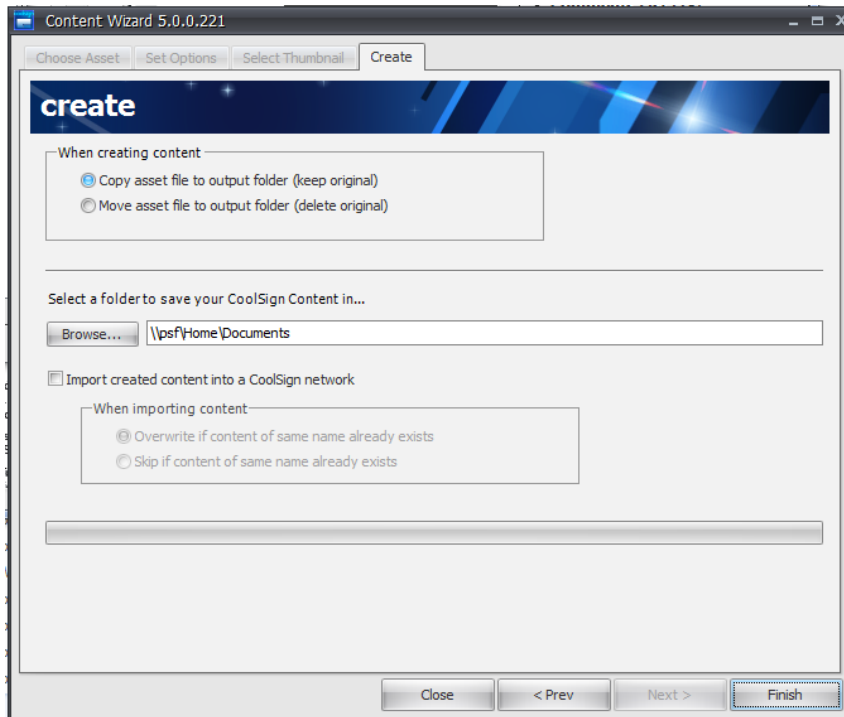
Copying or Moving Asset Files

By default, when your content is created, the Content Wizard creates a copy of your imported asset and leaves the original file intact. If you are batch-processing a large number of assets and the destination folder is on the same hard drive as the original files, you can select Move asset file to output folder to force the Wizard to move the original file instead of copying it. This makes the batch process much faster.

ℹ **NOTE**
You should always keep a separate backup of your original assets.

Selecting a Folder to Save Your Content In

Before you can finish converting your asset into CoolSign content, you must select a destination folder in which to save the converted content.

To do so, click Browse to select a desired folder.

Importing Content into a CoolSign Network

If you want the Content Wizard to import your content directly into the CoolSign network, check the Import created content into a CoolSign network box. Using the radio buttons, indicate the action to take if there is already content with the same name as the content you are importing.

ℹ **NOTE**

To import content directly from the Content Wizard, you must have Write Content capability. For details, see 21. "About Security" on page 322 in the *CoolSign Network Mangager User's Guide*.

When the CoolSign Manager login dialog appears, enter your user name and password and select the CoolSign network where you wish to import the content.

After verifying your login credentials, the Content Wizard imports the content into the CoolSign network, then disconnects you from the CoolSign network.

Completing the Content Wizard

After completing each step in the wizard, click Finish to convert the selected asset(s) into CoolSign content. The wizard creates your content in the destination folder ready for import into a CoolSign network. For more information, see "Managing Content" on page 106 of the *CoolSign Network Mangager User's Guide*.

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6.6   Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Province of Québec, Canada and the Laws of Canada applicable therein (excluding any conflict of laws rule or principle, foreign or domestic).

6.7   Severability. If any provision of this Agreement is held by a court of competent jurisdiction to be contrary to law, such provision shall be changed and interpreted so as to best accomplish the objectives of the original provision to the fullest extent allowed by law and the remaining provisions of this Agreement shall remain in full force and effect.

6.8   Force Majeure. Neither party shall be liable to the other party for any failure or delay in performance to the extent that such delay or failure is caused by fire, flood, explosion, war, terrorism, embargo, government requirement, labor problems, export controls, failure of utilities, civil or military authority, act of God, act or omission of carriers or other similar causes beyond its control. If any such event of force majeure occurs, the party delayed or unable to perform shall give immediate notice to the other party, and the party affected by the other's delay or inability to perform may elect, at its sole discretion, to terminate this Agreement or resume performance once the condition ceases, with an option in the affected party to extend the period of this Agreement up to the length of time the condition endured. Unless written notice is given within 30 calendar days after the affected party is notified of the condition, the latter option shall be deemed selected. During an event of force majeure, the affected party shall exercise reasonable effort to mitigate the effect of the event of force majeure.

If you have questions, please contact Haivision Systems Inc., 4445 Garand, Montréal, Québec, H4R 2H9 Canada.

C. Revision History

Haivision
Montreal · Chicago · Beaverton · Austin
Hamburg · Dubai · Hong Kong
+1.514.334.5445 / +1.847.362.6800

www.haivision.com
sales@haivision.com