Cisco StadiumVision
Defining Channels and Channel Guides in SV Director

Version 2.3

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Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
          800 553-NETS (6387)
Fax: 408 526-4100

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Document History

Table 1. Revision History

Date	Revision	Author	Comments
11/17/2010	0	Trish McBride	Complete for 2.2.x
2/7/2011	1	Debbie Morrison	Updated for 2.3

Defining Channels and Channel Guides

These procedures can be performed ONLY by the Administrator and Content Manager roles in SV Director.

StadiumVision allows you to distribute in-house video and re-distribute external channels including over the air (OTA) local channels, satellite, and cable TV. Video can be in either high definition (HD) or standard definition (SD). There is no limit to how many channels you can offer. The channels you select will be available for viewing anywhere you have TVs connected to DMPs: in bars and restaurants, the back office, and in luxury suites. Users can change channels from the IP Phone or using the IR remote.

Figure 1 shows an example of the channel guide on the TV and the IP phone.

Figure 1. Channel Guide Lineup on TV and IP Phone

Channel Lineup Designation at the Headend

A combination of external and internal channels make up the "channel lineup" that is available throughout the venue.

Although the concept of a channel number doesn't really exist in the IP world, channel numbers are typically assigned to each channel at the headend. These numbers are arbitrary, but can be numbered correspond to the top 15 channels that will show up on the IP phone control in the Luxury suites.

To enable channel selection at the endpoints:

- On the Cisco DCM, each (in-house or external) channel received is mapped to its unique multicast group address and UDP port number.
- In Cisco StadiumVision Director, each unique multicast group/UDP port number pair is assigned a StadiumVision channel number and a channel name.
- Cisco StadiumVision Director uses this mapping to direct DMPs to specific channels and populate an electronic program guide which lists the available channels.

Note: For information about how to configure the channel lineup at the headend, see the *StadiumVision Headend Design and Implementation Guide*.

Defining the Master Channel List

Once channels have been defined at the headend, you need to define a master channel list on the **Setup > Channels** page in the SV Director Control Panel.

Consider the following before you configure the master channel list:

- **Channels to be offered:** Decide how many in-house live video feeds you will have and which external channels you will offer.
- **Channel Numbering Scheme:** You may want in-house channels at the top of your numbering scheme. You may want your numbering scheme to match the area satellite or cable numbering scheme. You may choose to hide some of the channels you have in house.
- **Channel Guide Appearance**: Decide the channel guide descriptions that appear on the TVs in your luxury suites, bars, and restaurants and whether you want a team logo to appear on the screen.
- For each channel that should appear in the channel lineup accessed by a Cisco IP Phone or IR remote, set the "Visible in IP Phone Guide" field on the Channels panel to **Yes**.
- For each channel that is to appear in the channel lineup accessed by a third-party touch panel, set the "Visible in 3rd Party Guide" field on the Channels panel to **Yes**.

**Channel Guide Considerations with Third-party Devices**

- If you make changes to a channel guide that is associated with an area serviced by a third-party touch panel, the third-party device must reload the latest channel guide information. Consult the third-party device integrator (AMX or Crestron) for reload options.
- If you are using a third-party touch panel, decide which 10 channels you will display on your favorites screen (TV screen only) and how you will represent each of those channels (in text, with channel logos, with icons representing the field camera, etc.). You may also choose to display your team logo on these screens.

Note: Starting with StadiumVision release 2.0, favorite channels are no longer supported on the IP Phones.

Adding Channels to the Master Channel List

1. Open the Control Panel and select the **Setup > Channels**. The Master Channel List displays in the **Master Channel List** tab.

Figure 2. Adding a Channel to the Channel List
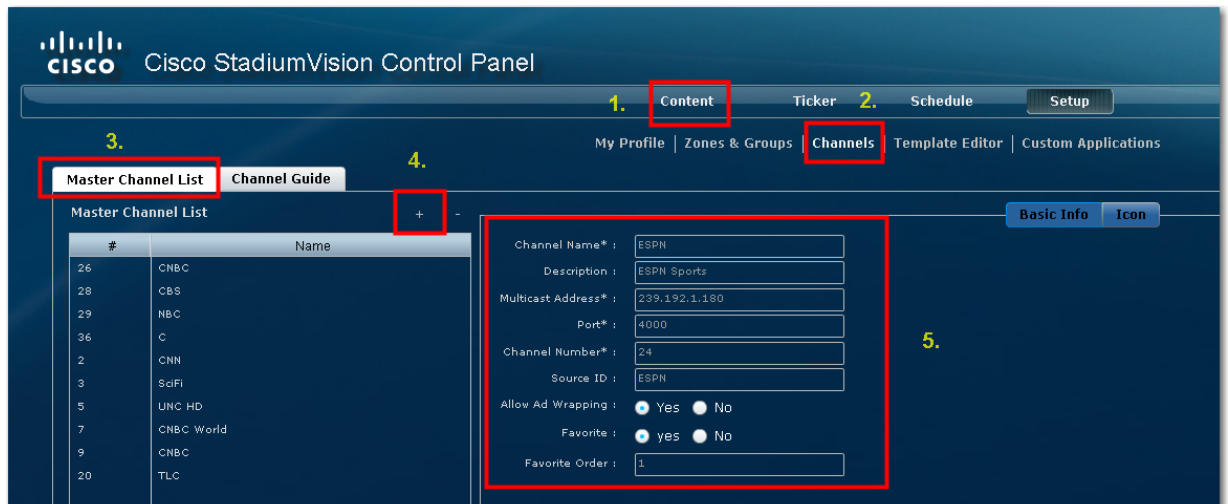
2. Click "**+**" at the top of the Master Channel List.

3. On the **Basic Info** tab, define the information listed in Table 2. The description and source ID are optional.

Note: The Channel name configured in StadiumVision Director should be limited to 12 characters or less. Due to the space allotted for channel names on the IP Phone interface, more than 12 characters may have undesirable results.

Table 2. Adding a Channel to the Master Channel List

Field	Description
Channel Name	The name of the channel as you would like it to appear on the channel guide that appears on your video displays. A maximum of 12 characters are supported.
Description	Description of what is playing on the channel (optional). This shows up on the TV only.
Multicast Address	The multicast IP address of this channel designated at the StadiumVision headend.
Port	The multicast port used to communicate with this channel as designated at the StadiumVision headend.
Channel Number	The number you want to assign to this channel. This channel number will appear in the channel guides on the TVs and IP Phones.
Source ID	Placeholder for future program guide integration. Not required.
Allow Ad Wrapping	Ad wrapping refers to displaying this channel in an L-wrapper or similar screen template where advertisements play alongside the video stream.
Favorite	Specify "yes" if you want the channel to be listed as a favorite in the channel guide controlled by a 3rd party touch panel.

Favorite Order	Enter a number (between 1 and 10) indicating the ordinal placement of this channel in the listing,

4. When you have filled in all the required fields, click **Save**. As soon as you save this channel, it will appear in the Master Channel List.

Note: You must do a save before you add or modify another channel. As soon as you move from one channel to another without doing a save, all of your input is lost.

5. Repeat steps 3 and 4 to add all the channels you want to display in StadiumVision.

Using "Favorites" (Third-Party Touch Panels Only)

In addition to the channel lineup, a maximum of 10 channels can be identified as favorites, which appear on the initial video control page of the third-party touch panels.

For each channel that should be listed as a favorite:

- In the Favorite field, select **Yes**.
- In the Favorite Order field, enter a number (between 1 and 10) indicating the ordinal placement of this channel in the listing,

Work with the third-party device integrator to determine how the favorites list should be displayed on the third-party touch panels. All installations should move to access channels directly versus indirectly through the favorites mechanism.

Note: This feature will be removed in a future release.

Sorting the Master Channel List

Click the Master Channel List column headings (Name or #) to sort the channel names alphabetically in ascending or descending order or by channel number. You can also use the filter box to see only the subset of channels that have the characters you specify in the filter. The filter is not case sensitive. For example, if you type "e" in the filter box the following channels will appear: ESPN, ESPN2, Universal, HD Theater, HDNet, HDNet Movies, and E.

Creating and Assigning Channel Guides

Once you have added channels to the Master Channel List, you can create "per-area channel guides" to display a custom channel guide in different areas of the venue. For example, you can have a different set of channels available in each of the suites, concourses, clubs, the owners suite, back offices, locker rooms, concessions and ticket windows.

The per-area channel guides are a subset of the master channel list, meaning the channels numbers and descriptions are preserved. For example, a venue may have raw in-house channels that they want to make available only to the coaching staff

and not to the general public. This is achieved by creating two channels guides: one private and one public. The private channel guide is assigned to groups/zones of DMPs that control the TVs in the coaches office and locker rooms. The public channel guide is flagged as the default channel guide and hence is automatically assigned to all other DMPs.

You can designate one channel guide as the default channel guide. StadiumVision Director automatically assigns this channel guide to any DMP that is not associated with a luxury suite, bar, restaurant, or other area that supports local control, or any DMP that does not have a channel guide defined.

Note: If you make changes to a channel guide that is associated with an area serviced by a third-party touch panel, the third-party device must reload the latest channel guide information. Consult the third-party device integrator (AMX or Crestron) for reload options.

Creating a Channel Guide

1. Add channels to the Master Channel List. See Adding Channels to the Master Channel List.

2. Open the Control Panel and select **Setup > Channels**.

3. Click the **Channel Guide** tab (next to the **Master Channel List** tab).

4. Click the plus (+) above the Channel Guide and type a name and description for the new channel guide.

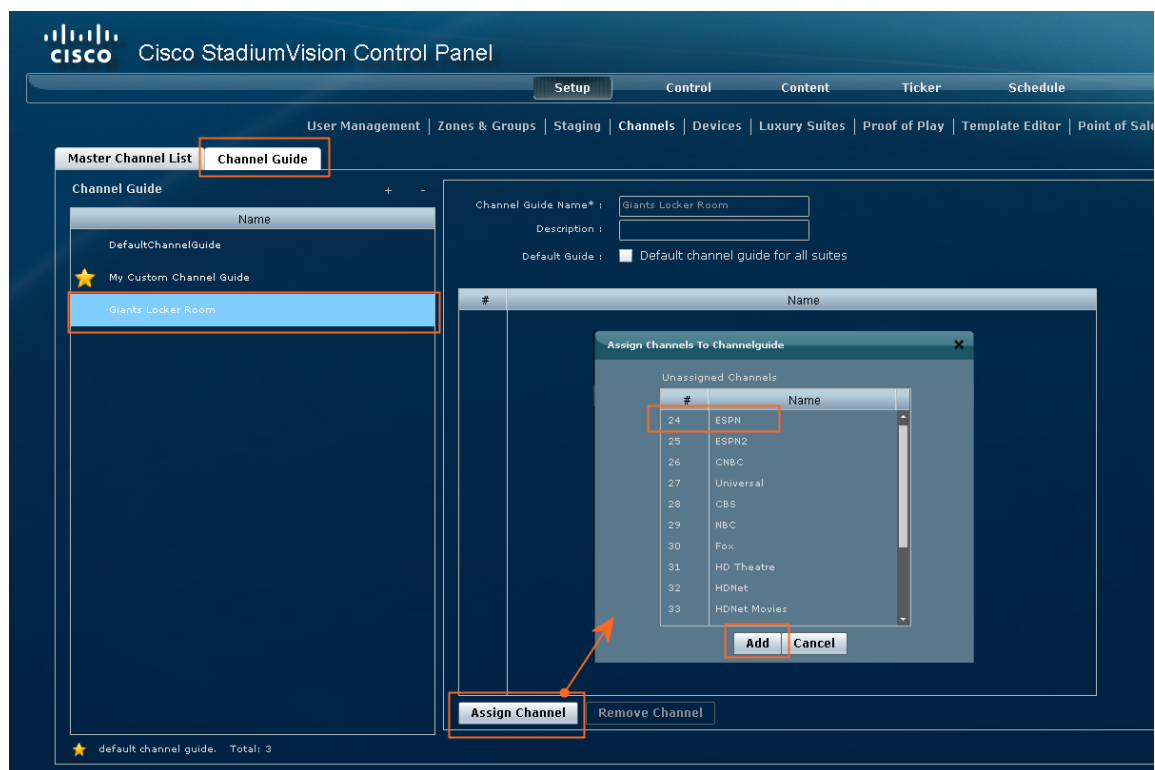**Figure 3.** Creating a Per-Area Channel Guide
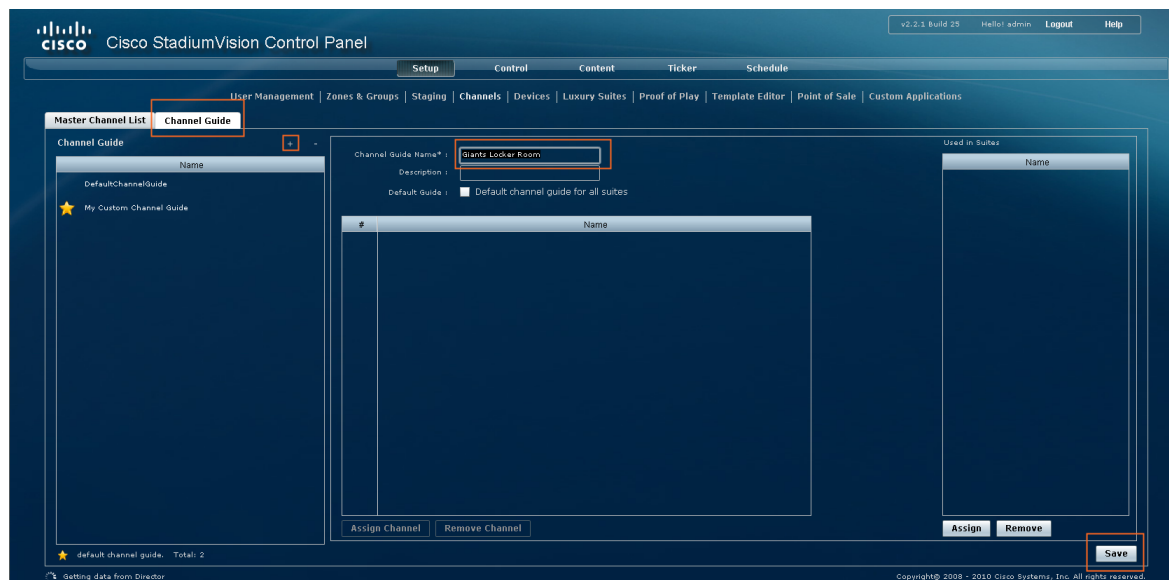
5. (Optional) Enable "Default Channel Guide for All Suites" to make this the default channel guide.

6. Click **Save**.

Assigning Channels to a Channel Guide

7. Create a channel guide as described in the previous procedure.

8. Open the **Channel Guide** tab and select the per area channel guide to which you want to assign channels.

9. Click **Assign Channel**. The Master Channel list displays.

10. Select the channels you want to add to the channel guide and click **Add**. You can use the keyboard Shift-click and Ctrl-click functions to select multiple channels. The channels you add display in the Channel Guide window.

11. When you are finished adding all the channels, click **Save**.

**Figure 4.**   Assigning Channels to the Channel Guide

Assigning a Channel Guide to a Luxury Suite/Local Control Area

To assign a channel guide to a luxury suite (*after the master channel list and a per area channel guide has been created*):

1. On the **Setup > Channels** page, select the per-area channel guide.

2. Click **Assign** (under the "Used in Suites" list).

Figure 5. Assigning a Channel Guide to a "Luxury Suite"
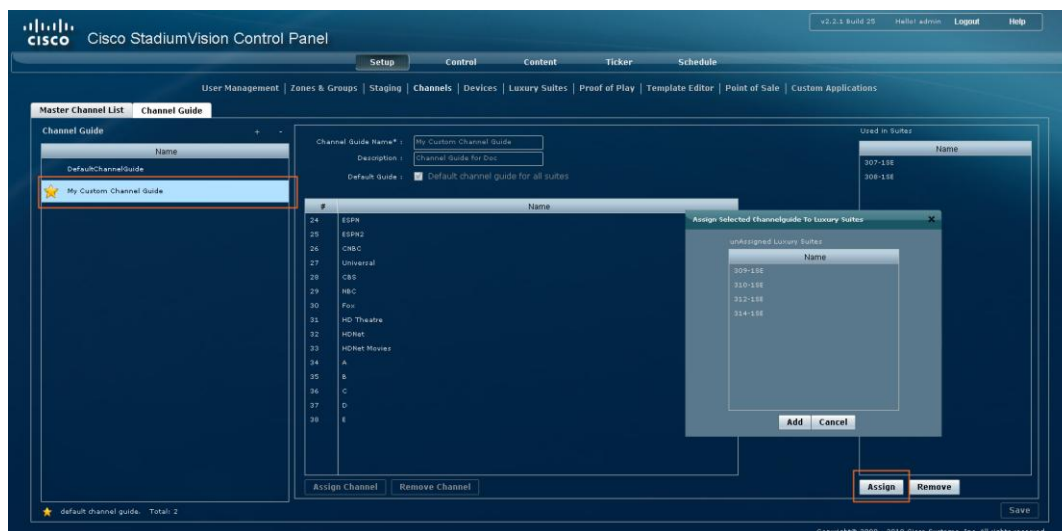
The list of undefined luxury suites/local control areas displays.

Note: In SV Director, the term "Luxury Suite" is used to define not only Luxury Suites but also any local control area.

3. Select the luxury suites/local control area to which you want to assign the custom channel guide. To select more than one suite/local control area, use the keyboard Shift-click and Ctrl-click keyboard functions.

4. Click **Assign**.

By default, when the channel guide is brought up on the IP Phone, it is also displayed on the selected TV(s). You can change this behavior by setting the "tvguide.autolaunch" parameter to 0 in the StadiumVision Director Management Dashboard Registry. See Controlling the Behavior of the Channel Guide.
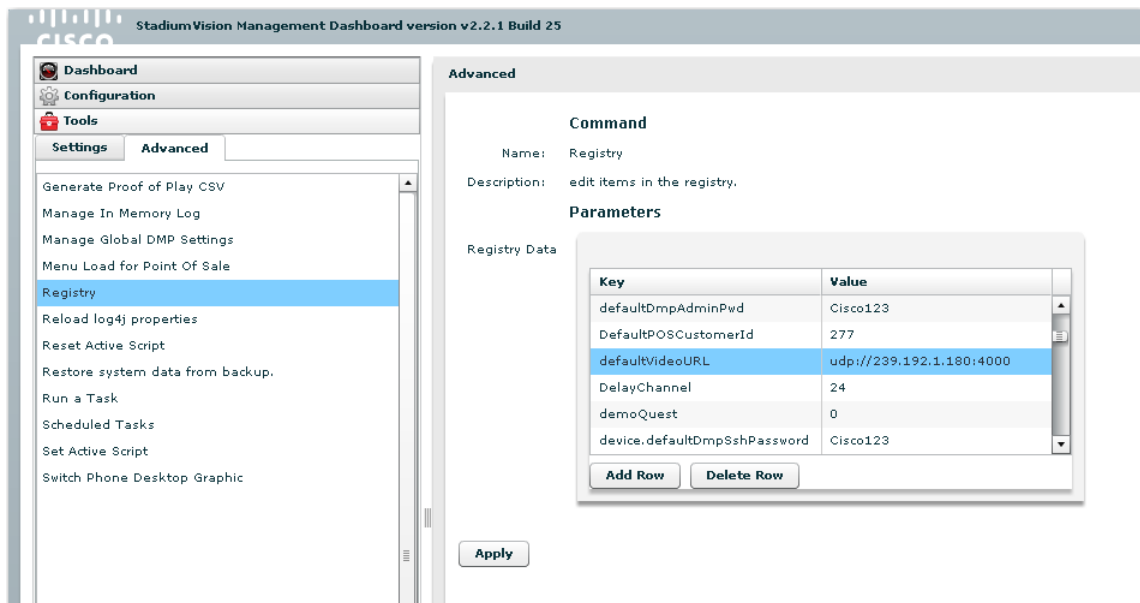
Defining the Default Channel

When there is no screen template or action assigned to a DMP, the DMP will display the default video channel that is configured in the Management Dashboard. If the DMP reboots, the TV will automatically be tuned to full screen video and display the default channel. The default channel applies to all DMPs serviced by the SV Director server.

To configure the default channel:

1. Open the Management Dashboard.

2. Select **Tools > Advanced**.

3. Click **Registry**.

4. Scroll to the **defaultVideoURL** registry entry.

5. Enter the URL for the multicast group (address + port) of the video stream you want to use for the default channel. This URL is typically provided by the StadiumVision headend engineer.

6. Click **Apply**.

Figure 6. Defining the Default Channel

Defining a Default Channel for a DMP

You can also define the default channel on a per DMP basis as follows. If this value is not defined, the DMP will use the default channel defined in the Registry.

1. Open the Management Dashboard.

2. Select the **Configuration** tab.

3. Select the DMP.

4. Select the **TV Commands > Set Video Channel** command.

5. Select the DMP type: 4305 or 4310.

6. In the parameters settings, enter the URL for the multicast group (address + port) of the video channel you want to play on the TV controlled by the selected DMP. This URL is typically provided by the StadiumVision headend engineer.

7. Click the Play button to send the command to the selected DMP.

8. Refer to Figure 7.

Figure 7.   Setting the Default Video Channel for a DMP
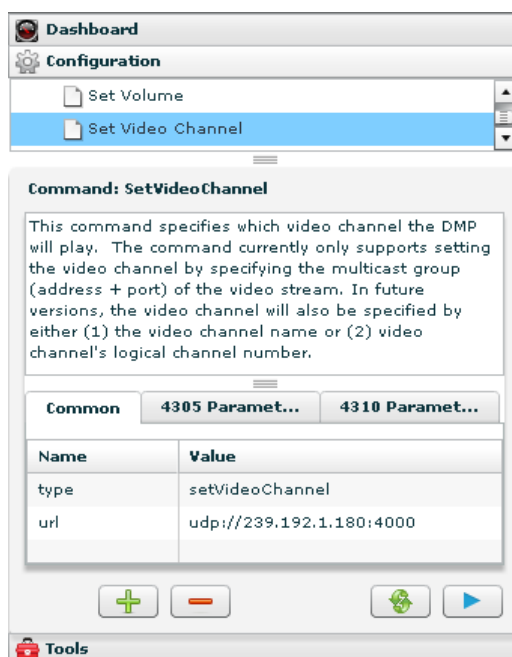
Adding Icons to the IP Phone Channel Guide

You can associate channel icons that display in the IP Phone channel guide. Channel icons must be obtained locally (the venue must obtain permission from the network) and must be a 24 x 24 PNG file.

Uploading a Phone Channel Icon

(If the icon already appears in the icon list, you can skip this step.)

1. Copy the icon graphic(s) to your local drive.

2. Select **Setup > Channels**.

3. On the Channels toolbar, click the **Icon** button. The icon list displays as shown in Figure 8.

Figure 8.   Channel Icon List

4. Click **Upload Icon** and browse to the png file you want to assign as a channel icon.

5. In the Import Content dialog box, enter the following information:

    Under "Keyword Tags to Apply" select where the channel icon will be used:

    – DMP (for TV banner)
    – Phone
    – 3rd Party Remote

    You can upload and tag multiple icons for the same usage type at the same time.

6. Select an expiration setting.

7. Click **Upload**. The icon you uploaded will now appear in the icon list.

Figure 9.   Import Content Dialog Box

Figure 10. Uploading a Channel Icon

Assigning a Phone Channel Icon

Once you have created a master channel list and uploaded phone channel icons, assign them to channels as follows:

1. In the icon list, select the channel for which you want to assign an icon. The channel number displays in the Assigned Icons box.

2. Select the icon you want to assign to the channel.

3. Click the **Assign Icon** button.

4. Click **Save**. A message displays confirming the icon assignment was successful.

Figure 11. Assign the Icon
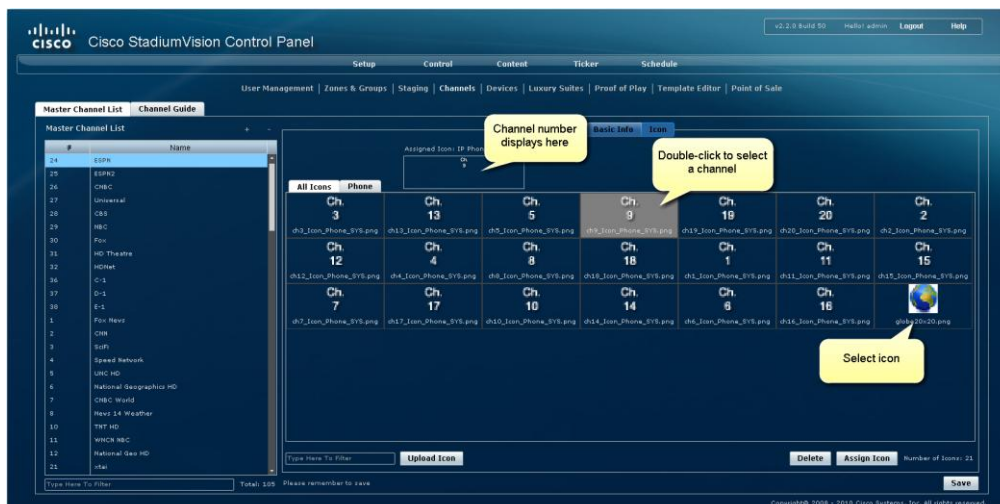
Displaying a Custom Logo in the TV Channel Guide

The channel guide that appears on the TV is a Flash file that is displayed on the TVs in luxury suites, bars, clubs and restaurants. If desired, this guide can include a venue or team logo in the upper left corner on the TV screen, as shown in Figure 12. The logo must be uploaded in the SV Director content repository using a specific keyword tag. Then, when the channel guide is displayed, the flash application pulls in the graphic with this file name and places it at the upper left of the screen.

The recommended best practice for displaying a logo on the TV channel guide is to store each logo using a file name that makes it easy to locate. Then, for the event, apply the required keyword tag (as described in the previous section) to the appropriate logo. Remember to remove the keyword tag after the event.

Figure 12. Logos on the Channel Guide

Note: Logos are not supported on the channel guide displayed on the Cisco IP Phone.

To display a custom logo in the TV Channel Guide:

1. Upload a logo file to the SV Director content library. The file must have the **exact** with the exact resolution, file type, and keyword tag as shown in Table 3. The size, file type, and required keyword tag of the logo depends on whether the venue is using the DMP 4305G or DMP 4310G.

Table 3. Specifications for Displaying a Custom Logo on the TV Channel Guide

DMP Model	Resolution	File Type	Keyword Tag
4310G	300x180	PNG or JPEG	Icon_Team_4310_SYS
4305G	218x128	JPEG	Icon_Team_4305_SYS

Channel Guide Behavior

- If a DMP is assigned to more than one Luxury Suite, it will use the Per-Area Channel Guide associated with the last Luxury Suite to which it was assigned. For example if a DMP is added to Suite 1 and then added to Suite 2, it will use the Channel Guide defined for Suite 2. For this reason, it is recommended that you do not assign a DMP to more than one Luxury Suite.
- If the user changes the channel via an IP phone, IR remote, or 3rd-Party remote, the channel chosen by the user will override the currently playing video playlist with the selected video.
- If the template is full screen video or 3-region video, the template will not change, but the video will change to the selected channel.
- If the template is full screen signage, the signage will be replaced with full screen video showing the selected channel.
- If the DMP is showing a playlist of video, the entire playlist will be replaced by the single video channel. For example, if the playlist contains three videos, all three videos will stop and be replaced by selected channel.
- When the state changes on a DMP that is associated with a local control area (luxury suite, bar, restaurant, etc.), the script contents will override the user's local control.

  Therefore, if you expect a DMP to be locally controlled, any states in use during that period should **not** change the template or channel. This is particularly important when using ad hoc states with locally controlled DMPs. StadiumVision Director will treat the return from an ad hoc as a state change, so if the base state has a channel setting, the channel on all locally controlled DMPs will return to the base channel when the ad hoc state ends.
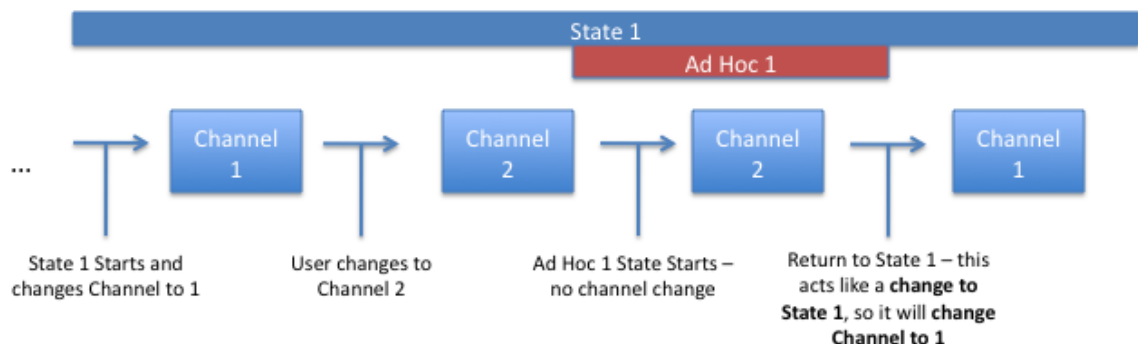
Controlling the Behavior of the Channel Guide

The appearance and behavior of the channel guide are controlled by parameters in the StadiumVision registry. These settings control whether:

- A preview window is displayed when a channel is selected.

- The channel guide is automatically displayed on the TV when it is selected on the phone.
- The phone UI continues to display the channel guide after a channel has been selected.

For individual luxury suites, you can override the setting that controls the automatic display of the channel guide on the TV through the Control Panel.

Setting Channel Guide Behavior in the Registry

The registry settings to control the behavior of the channel guide are as follows:

- tvGuide.ChannelSelectFullScreen

  This parameter controls whether the selected channel is displayed in full-screen mode. The default is tvGuide.ChannelSelect FullScreen = 1.

  - If the tvGuide.ChannelSelectFullScreen = 1 and the guide is displayed on the TV, then when a user selects a channel, the selected channel is displayed in full-screen mode on the TV.
  - If the tvGuide.ChannelSelectFullScreen = 0 and the guide is displayed on the TV, then when a user selects a channel, the guide preview window will change but the user must navigate away from the channel select page (by moving to the Home Page, Display Select Page, Exit, etc.) for the selected channel to be displayed in full-screen mode on the TV.

- tvguide.autolaunch

  This parameter controls whether the channel guide is automatically displayed on the TV when the display is selected. The default is tvguide.autolaunch = 1. (This will change in subsequent releases.)

  - If tvguide.autolaunch = 0, do not automatically display the guide.
  - If tvguide.autolaunch = 1, automatically display the guide.

- phoneControl.stayOnChannelSelect

  This parameter controls whether the IP Phone continues to show the channel guide after the user has made their selection. The default is phoneControl.stayOnChannelSelect = 1. This registry parameter must be added.

  - If the phoneControl.stayOnChannelSelect = 0, the IP Phone will go back to previous page after the user selects a channel.
  - If the phoneControl.stayOnChannelSelect = 1, the IP Phone will continue to display the channel guide after the user selects a channel.

The following table indicates how the settings for these three parameters interact to produce a specific behavior.

tvguide. autolaunch	tvGuide. ChannelSelect FullScreen	phoneControl. stayOn ChannelSelect	Resulting Behavior
0	0	1	After display is selected. the Channel Guide appears on the IP Phone (but not on the TV). The user selects channel and channel changes on TV. If the user invokes the Guide on the IP Phone, the Guide will appear on the TV; subsequent channel selections will only change the preview window of the channel guide. Navigation away from the TV guide will be necessary for the video to return to full screen. IP phone will show channel guide page after selecting channel.
0	1	1	After display is selected. The Channel Guide appears on the IP Phone (but not on the TV). User selects channel and channel changes on TV. If the user invokes the Guide button on the IP Phone the TV Guide will appear on the TV screen; subsequent channel selections will change the selected channel to full screen. IP phone will show channel guide page after selecting channel.
1	0	1	After display is selected. The Channel Guide appears on the IP Phone (and on the TV). User selects channel and channel changes will only change the preview window of the channel guide. Navigation away from the TV guide will be necessary for the video to return to full screen. IP phone will show channel guide page after selecting channel.
1	1	1	After display is selected, the Channel Guide appears on the IP Phone (and on the TV). User selects channel and channel changes on TV Full Screen. IP phone will show channel guide page after selecting channel.
0	0	0	After display is selected, the Channel Guide appears on the IP Phone (but not on the TV). If the user invokes the Guide button on the IP Phone the TV Guide will appear on the TV screen; subsequent channel selections will change the selected channel to full screen because the phone navigation will leave the channel selection page. IP phone will go back to previous page after selecting channel.
0	1	0	After display is selected, the Channel Guide appears on the IP Phone (but not on the TV). User selects channel and channel changes on TV. If the user invokes the Guide button on the IP Phone the TV Guide will appear on the TV screen; subsequent channel selections will change the selected channel to full screen. IP phone will go back to previous page after selecting channel.

1	0	0	After display is selected, the Channel Guide appears on the IP Phone (and on the TV). User selects channel and selected channel will be full screen on TV because the phone navigation will leave the channel selection page. IP phone will go back to previous page after selecting channel.
1	1	0	After display is selected, the Channel Guide appears on the IP Phone (and on the TV). User selects channel and channel changes on TV Full Screen. IP phone will go back to previous page after selecting channel.

Overriding the Channel Guide Autolaunch Setting

By default, all luxury suites will adopt the channel guide behavior defined in the registry. However, from the Control Panel, you can override the channel guide autolaunch setting in the registry for individual luxury suites.

1. In the Control Panel, go to **Setup > Luxury Suites**.

2. Select the desired luxury suite from the list.

3. Select the desired behavior from the TV Guide Autolaunch drop-down list.

If you select:

- **Default Registry Settings** - The channel guide autolaunch behavior is regulated by the tvguide.autolaunch registry setting (described in the previous section).
- **Force TV Guide Autolaunch** - The channel guide will automatically be displayed on the TV when the channel guide is selected on the IP Phone, regardless of the system registry setting.
- Disable TV Guide Autolaunch – The channel guide will *not* automatically be displayed on the TV when the channel guide is selected on the IP Phone, regardless of the system registry setting.

4. Click **Save**.

5. Repeat steps 2-3 for each luxury suite where the desired autolaunch behavior differs from what is defined in the registry setting.

Setting Channel Guide Parameters in the Registry

1. Open the Management Dashboard.
2. On the **Tools > Advanced** page, click **Registry**.

Figure 13. Setting Channel Guide Parameters in the Registry

3. Click **Load** to ensure that you are viewing the current settings.
4. Scroll through the Registry Data list to the desired parameters. **Note:** To change the phoneControl.stayOnChannelSelect parameter from its default (1), you must add the parameter using **Add Row**.
5. Click the Value field beside each parameter and enter the appropriate values.
6. Click **Apply**.

For more information about the Registry, see the *StadiumVision Director Management Dashboard User Guide*.

Figure 14. Setting Values for Channel Guide Parameters in the Registry
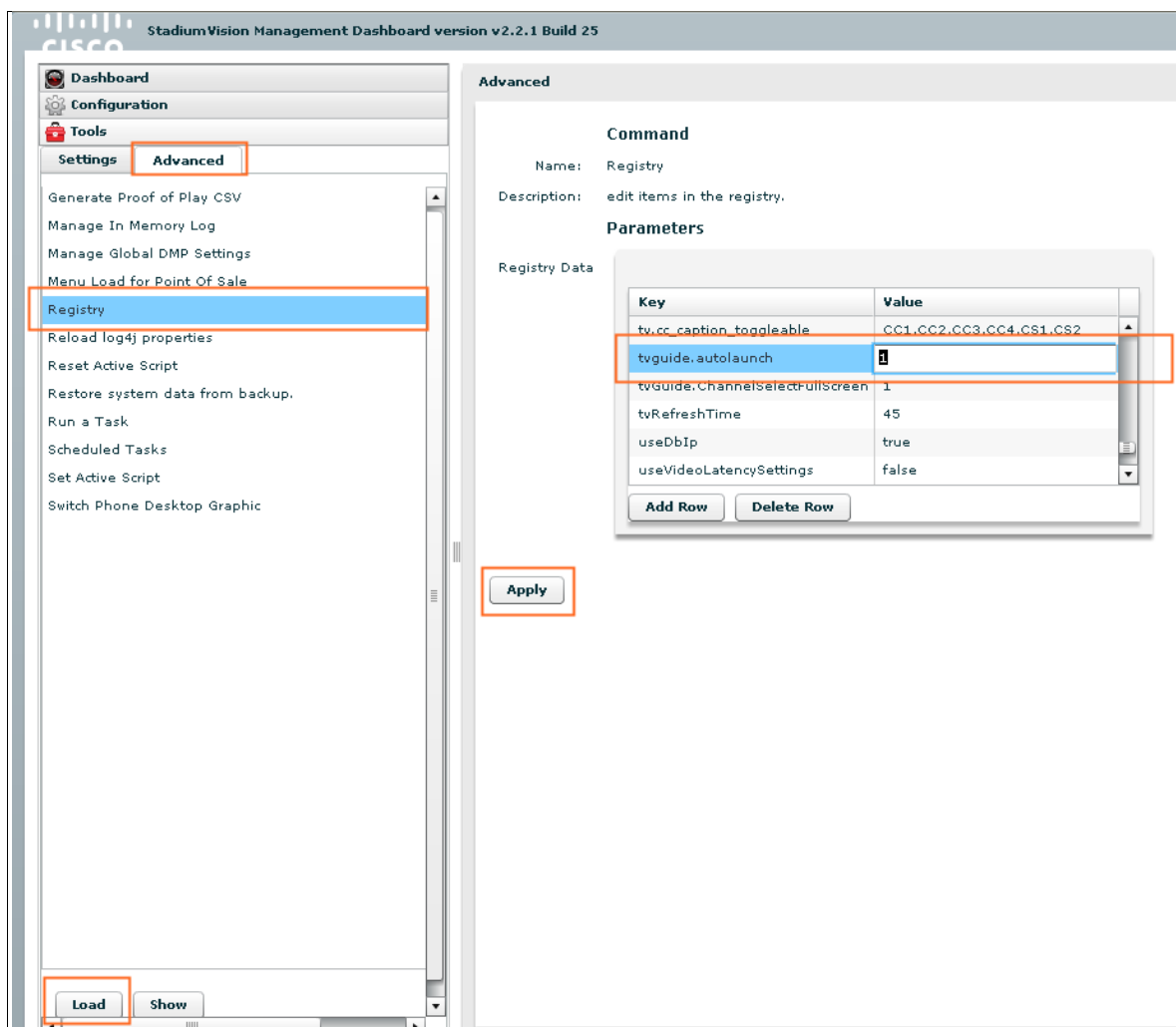
Defining a Delay Channel

If you have assigned DMPs to the delay_zone in SV Director, you can configure the channel you want to display on the TVs controlled by the DMPs in the delay zone during the delay event state as follows. If no channel is configured, the DMPs will display the default channel during the delay event state.
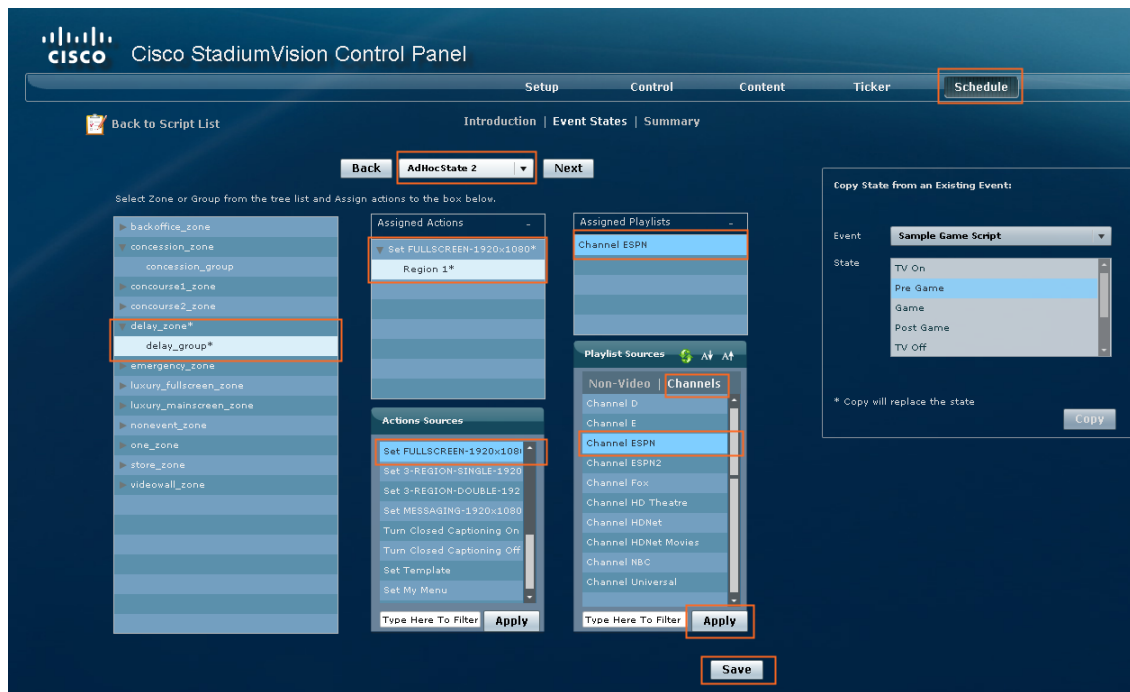
1. Open the event script.

2. Click the green plus sign (+) above the Ad Hoc states panel.

3. Enable the Manual transition button (the default setting).

4. Click **Edit** in the Ad Hoc State box.

Figure 15. Adding a Delay Ad Hoc State

5. Select **delay_group** from the tree list.

6. Select the **Set FULLSCREEN** action source and drag it to the Assigned Actions list.

7. Click Region 1.

8. Select the channel you want to play during a delay from the Playlist Sources channels list. For example, select **Channel ESPN**.

9. Drag the channel to the Assigned Playlists.

10. Click **Apply** and then click **Save**.

Figure 16. Defining a Delay Channel

Defining a Non-Event Channel

If you have assigned DMPs to the nonevent_zone in SV Director, you can configure the channel you want the TVs controlled in the non-event_zone to play when no event script is running. If no channel is configured, the DMPs will display the default channel during the non-event state.

1. Open the event script.

2. Click the green plus sign (+) above the Ad Hoc states panel.

3. Enable the Manual transition button (the default setting).

4. Click **Edit** in the Ad Hoc State box.
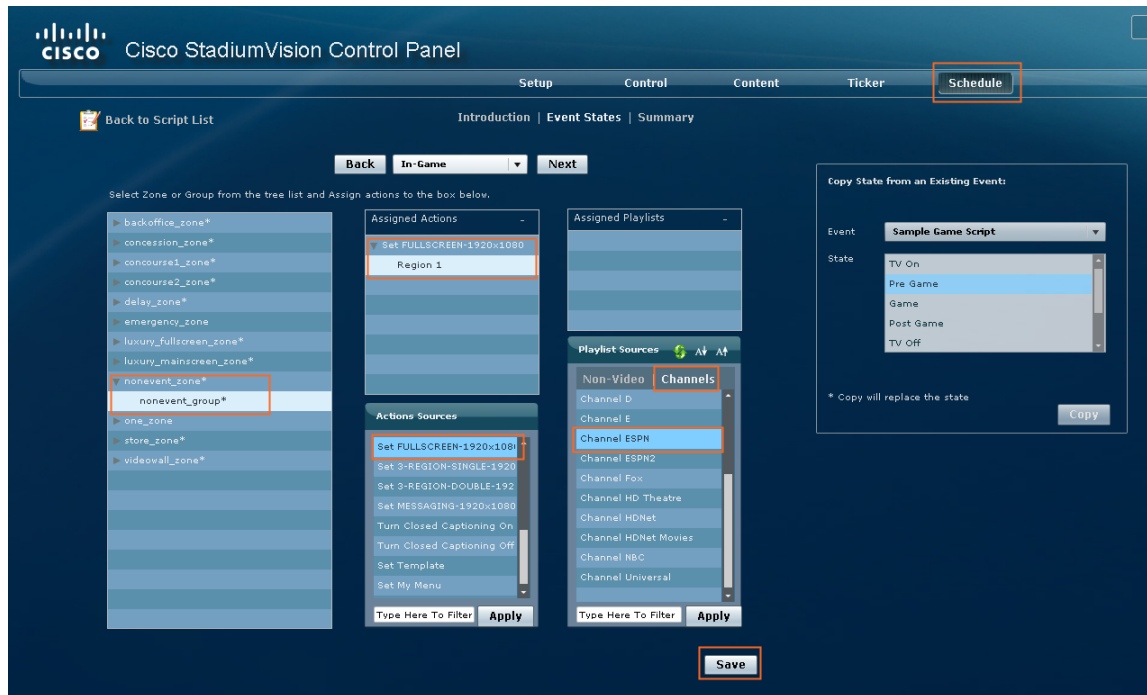
5. Select **nonevent_group** from the tree list.

6. Select the **Set FULLSCREEN** action source and drag it to the Assigned Actions list.

7. Click Region 1.

8. Select the channel you want to play when no event script is running from the Playlist Sources channels list. For example, select **Channel ESPN**.

9. Drag the channel to the Assigned Playlists.

10. Click **Apply** and then click **Save**.