VERTIGO XG INSIDE

VERTIGO XG AND ITX INTEGRATION

User Guide

v2.9

M852-9014-290

Revision 1

2016-08-05

www.grassvalley.com

Copyright and Trademark Notice

Copyright © 2016, Grass Valley Canada. All rights reserved.

Belden, Belden Sending All The Right Signals, and the Belden logo are trademarks or registered trademarks of Belden Inc. or its affiliated companies in the United States and other jurisdictions. Grass Valley, Miranda, iTX, Vertigo XG Inside are trademarks or registered trademarks of Grass Valley Canada. Belden Inc., Grass Valley Canada, and other parties may also have trademark rights in other terms used herein.

Terms and Conditions

Please read the following terms and conditions carefully. By using iTX documentation, you agree to the following terms and conditions.

Grass Valley hereby grants permission and license to owners of iTXs to use their product manuals for their own internal business use. Manuals for Grass Valley products may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose unless specifically authorized in writing by Grass Valley.

A Grass Valley manual may have been revised to reflect changes made to the product during its manufacturing life. Thus, different versions of a manual may exist for any given product. Care should be taken to ensure that one obtains the proper manual version for a specific product serial number.

Information in this document is subject to change without notice and does not represent a commitment on the part of Grass Valley.

Warranty information is available in the Support section of the Grass Valley Web site (www.grassvalley.com).

Title	Vertigo XG Inside User Guide
Software Version	v2.9
Part Number	M852-9014-290

Revision History

2016-04-25   First Publication

2016-08-05   Revised the version numbers for the compatible versions of iTX and
                    Vertigo Suite softwares.

Table of Contents

Integration of Vertigo XG and iTX

The branding capabilities of a typical iTX playout channel can be enhanced by integrating Vertigo graphics events into the iTX playout schedule. Using the VertigoXG plugin, Vertigo XG events can be added to the iTX Desktop's schedule as secondary graphics events and then inserted into the iTX program stream either using:

- the XG Inside as an option that integrates the XG Renderer directly within iTX Output Servers and iTX Playout Appliances

  or,

- an external Grass Valley Vertigo XG device downstream of the iTX Output Server

---

Note: The integration of the Vertigo XG and iTX is supported by the following versions of the iTX and Vertigo Suite software:

- iTX v2.9
- Vertigo Suite v5.2

Summary

Overview of the XG Inside workflow

Figure 1-1 shows how iTX and the XG Inside components work together on an iTX Playout Server machine.
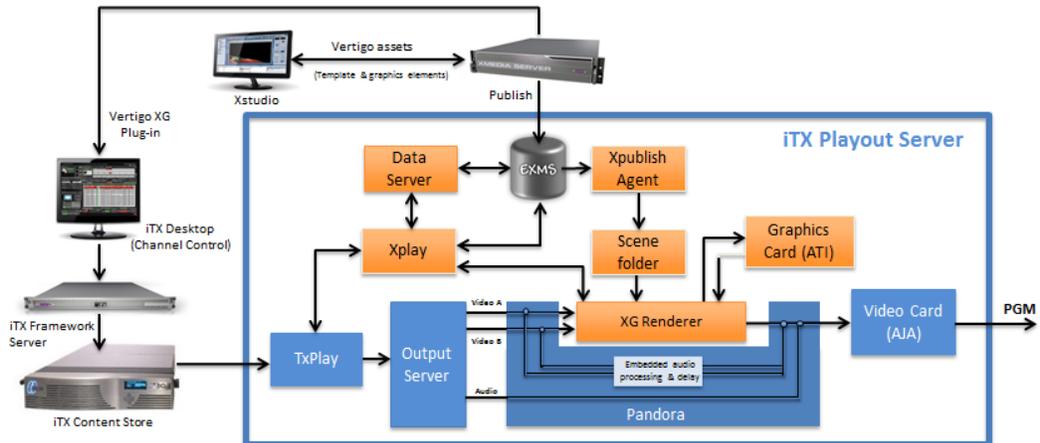

Fig. 1-1: XG Inside signal path and workflow

Graphics preparation

Vertigo templates are created offline using the Vertigo Suite's Xstudio application. The templates provide the layout, formatting and optional logic for controlling the graphics during playout. An advantage of using graphics templates is that unique instances of the graphics can be quickly created by changing the content elements, without having to recreate the layout and formatting. See the *Xstudio User Manual* for more information about using Xstudio to create Vertigo templates.

Once a template is created, it is saved to a Vertigo Xmedia Server. From there, the template and its associated graphics files are published to the Embedded Xmedia Server (EXMS) on the iTX Playout Server, where they become available for playout. The Xpublish Agent puts the graphics files in the Scene folder.

The VertigoXG plugin associated with the iTX Desktop allows you to browse the templates and pages stored on the Xmedia Server. Opening the template in the plugin allows you to edit the content of the template and save it as a graphics page on the Xmedia Server. The Xmedia Server then publishes the page and its associated graphics files to the Embedded Xmedia Server (EXMS) on the iTX Playout Server.

In addition to templates and pages, the VertigoXG plugin associated with the iTX Desktop also allows you to browse for standalone scenes stored on the Xmedia Server. Like the scene-side of a template, standalone scenes contain the collection of graphic objects that are displayed on air during playout. Standalone scenes are appropriate if the scene's objects and playout do not require any control logic (static and/or timed playout). However, if the scene's objects are to be data driven or controlled during playout, the scene should be associated with a template. See the *Xstudio User Manual* for more information about using Xstudio to create standalone scene assets.

Processing and playout of video and graphics

Using the Vertigo XG plugin in the iTX Desktop, the graphics page and scenes can then be added to the channel's schedule or timeline as a secondary event.

TX Play controls schedule playout by sending commands through the Output Server to the iTX Player to play out events at specified times. An event can feature one or two video sources, from which iTX produces an SDI or HD SDI output signal.

When an event includes a Vertigo page or scene, the iTX Player feeds the video streams to the XG Renderer. It always supplies two streams; if there is only one video source, one of the streams has blank frames.

Using the Oxtel protocol, TX Play instructs Vertigo Xplay to cue and take the page or scene. Xplay processes the page/scene requirements and sends playout commands to the XG Renderer.

The XG Renderer loads the page or scene and its associated graphics. The XG Renderer and the GPU renders the graphics with the video streams and passes a single rendered video stream back to the iTX Player, which combines this with the audio stream(s) for playout through the AJA video card.

The iTX Player does not pass any audio content to the XG Renderer. It disembeds the audio content from the video streams, diverts it around the XG Renderer and then re-embeds it into the rendered video stream (after a delay to compensate for the render process).

For events that do not feature a Vertigo page or scene (XG Event), the video streams simply pass through the XG Renderer (see Figure 1-2).

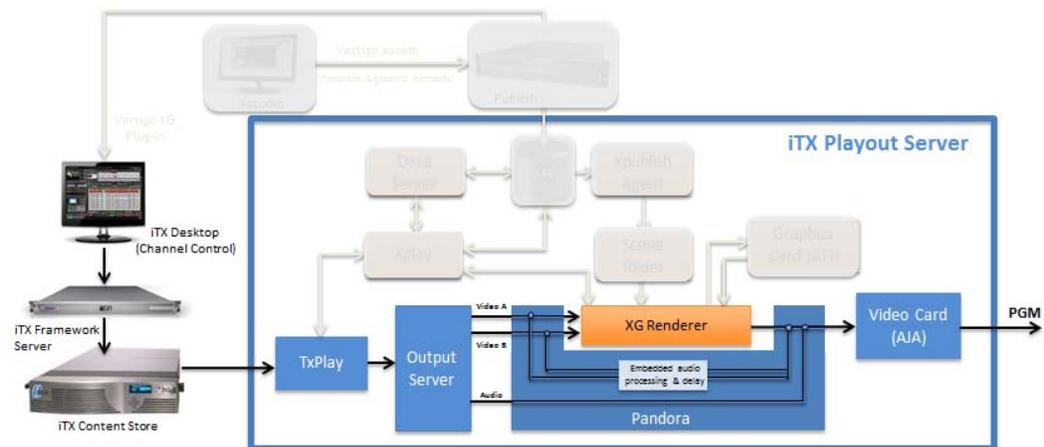*Fig. 1-2: For all other event types, the video streams pass through the XG Renderer*

Limitations of the XG Inside

The following limitations currently apply to the integration of the Vertigo XG components in the iTX Output Server.

- The system can handle one or two video streams from any of the following source options: one video clip; two video clips; a live feed; a video clip and a live feed.

- Cel animations are only supported if they are in the Grass Valley VAF format. Uncompressed TGA sequences are likely to have an adverse affect on the performance of the Output Server.

- The XG Renderer plays out audio clips embedded in a Vertigo XG template; but it does not perform any audio mixing with content from the iTX Player, since this contains no audio stream. This means that Vertigo templates cannot modify the audio properties (e.g. volume levels) of the clips played out by iTX.

- Audio-level reduction (ducking) and sound effects cannot be controlled from the XG Renderer.

- The XG Renderer does not modify any AFD code in the video streams.

- The XG Renderer does not include caption or subtitle data in the video stream it returns to the iTX Player.

- The XG Renderer cannot pass SNMP data to the iTX system.

- Where there is only one video stream and the source is a live feed, only transitions that do not involve overlapping video streams are possible (e.g. cut-cut; fade out, followed by fade in).

- Since the XG Renderer is responsible for the compositing of PGM A and PGM B video, traditional iTX functionality for squeeze-backs and picture-in-picture (PIP) effects do not work.

Overview of the downstream Vertigo XG workflow

Figure 1-3 demonstrates that in a downstream branding model, the iTX Playout Server acts as an upstream video server, feeding video and audio content to the external Vertigo XG device. Meanwhile, graphics content is created and managed using the Vertigo Suite's Xstudio and the Xmedia Server. iTX is the automation system that drives the playout schedule, including controlling the playout of graphics events from the Vertigo XG using Oxtel automation protocol commands.
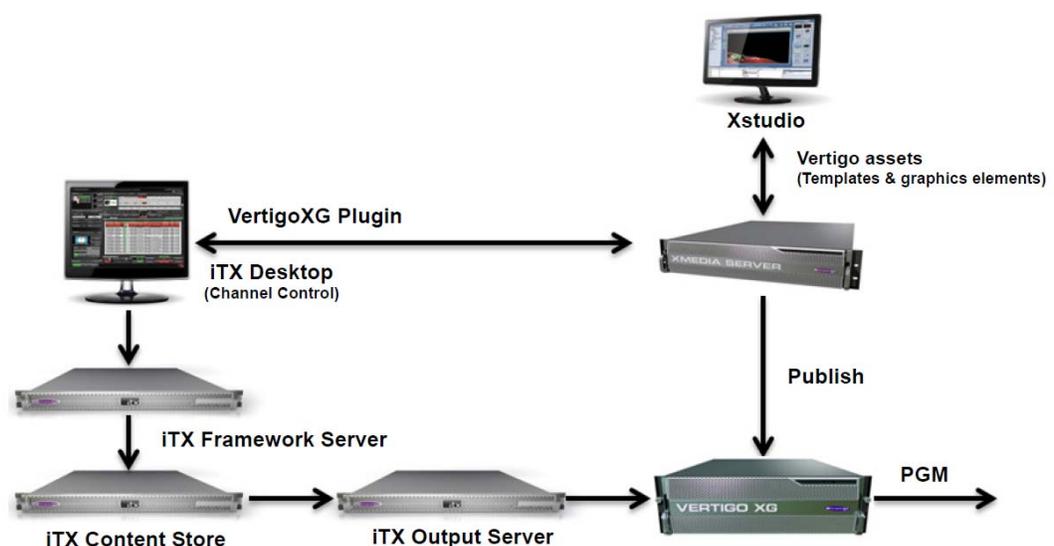

Fig. 1-3: System diagram of an external Vertigo XG device downstream of an iTX system

Graphics preparation

Vertigo templates are created offline using the Vertigo Suite's **Xstudio** application. The templates provide the layout, formatting and optional logic for controlling the graphics during playout. An advantage of using graphics templates is that unique instances of the graphics can be quickly created by changing the content elements, without having to recreate the layout and formatting. See the *Xstudio User Manual* for more information about using Xstudio to create Vertigo templates.

Once a template is created, it is saved to a Vertigo Xmedia Server. From there, the template and its associated graphics files are published to the Embedded Xmedia Server (EXMS) on the Vertigo XG device, where they become available for playout.

The VertigoXG plugin associated with the iTX Desktop allows users to browse the templates and pages stored on the Xmedia Server. Opening the template in the plugin allows users to edit the content of the template and save it as a graphics page on the Xmedia Server. The Xmedia Server then publishes the page and its associated graphics files to the Vertigo XG device.

In addition to templates and pages, the VertigoXG plugin associated with the iTX Desktop also allows users to browse for standalone scenes stored on the Xmedia Server. Like the scene-side of a template, scenes contain the collection of graphic objects that will be displayed on air during playout. Standalone scenes are appropriate if the scene's objects and playout do not require any control logic (static and/or timed playout). However, if the scene's objects are to be data driven or controlled during playout, the scene should be associated with a template. See the *Xstudio User Manual* for more information about using Xstudio to create standalone scene assets.

Processing and playout of video and graphics

For system resilience, we recommend an independent control setup where the backup channel is configured to use a different Vertigo XG device and commands are always sent from both the Main and Backup channels regardless of which one is Master.
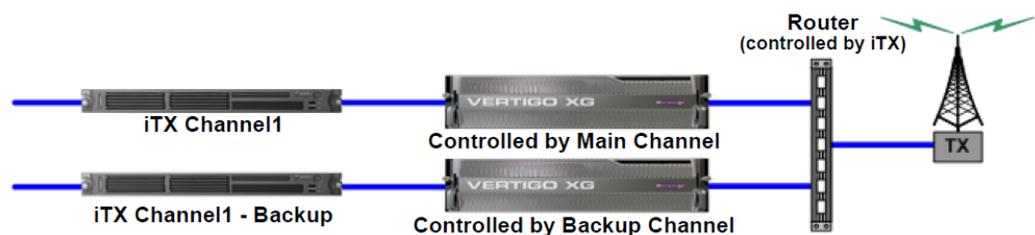
Fig. 1-4: Vertigo XG architecture

Using the Vertigo XG plugin in the iTX Desktop, graphics pages are added to the channel's schedule or timeline as a secondary event.

TX Play controls schedule playout. It sends commands through the Playout Server to the iTX Player to play out events at specified times. An event can feature one or two video sources, from which iTX produces an SDI or HD SDI output signal. The output signal is then fed to the Vertigo XG device's input.

When an XG event (Vertigo page or scene) is encountered in the schedule, TX Play uses the Oxtel protocol to instruct the Vertigo XG's Xplay to cue and take the page or scene. Xplay processes the page requirements and sends playout commands to the XG Renderer.

The XG Renderer loads the page/scene and its associated graphics. The XG Renderer and the GPU renders the graphics with the video streams and outputs a single rendered video stream to air.

For events that do not feature a Vertigo page or scene (XG Event), the video streams simply pass through the Vertigo XG.

2

Installing and Configuring XG Inside

This chapter provides information and instructions for how to add and setup the XG Inside option on an iTX Output Server or iTX Playout Appliance. Instructions are also provided for how to configure a system that uses an external Vertigo XG downstream from an iTX Output Server.

> Note: The scope of this chapter does not include hardware installation, cabling and other system-level installation and configuration information and instructions. We recommend that you consult the Vertigo XG, Xmedia Server and iTX system installation and configuration documentation before attempting to configure your system for the integration of XG branding within an iTX system.

Summary

Setting up XG Inside for single channel playout

The following procedure identifies the tasks for installing and configuring the software components required for using the XG Inside option on a single channel iTX Output Server or iTX Playout Appliance.

To install and configure XG Inside for a single iTX playout channel:

1 Install the **ITXG Xmedia Suite Install** software component on the iTX Output Server (page 8).

> IMPORTANT
> This task should only be performed on iTX Output Servers. Proceed to the next task if you are configuring XG Inside on a iTX Playout Appliance since the software component is factory-installed on iTX Playout Appliances.

2 Establish the connection between TX Play and Xplay (page 8).

3 Add the XG Inside device to the Xmedia Server's Vertigo Device Manager (page 8).

4 Enable auto-publishing on the Xmedia Server's Templates, Pages and/or Scenes asset categories (page 9).

5 Install and configure the **Vertigo ITX Desktop plugin** on the client machine hosting the iTX Desktop application (page 10).

Installing ITXG Xmedia Suite Install on an iTX Output Server

The Vertigo Suite Installer's **ITXG Xmedia Suite Install** software preset contains the XG Renderer and its associated components and must be added to the iTX Output Server.

> Note: The ITXG Xmedia Suite Install software component is factory-installed on all iTX Playout Appliance - Single channel devices and Playout Appliance 2 devices. If you are adding and configuring the XG Inside option on an iTX Playout Appliance unit, do <u>not</u> reinstall it. Proceed to the next task in this configuration procedure.

To add the ITXG Xmedia Suite Install component to an iTX Output Server:

1 Ensure the iTX Server Controller is not running.

2 Acquire and run the latest version of the Vertigo Suite Installer.

3 When the installation wizard requests you to select components, select the **ITXG Xmedia Suite Install** preset configuration.

4 Follow the on screen instructions and install all dependencies.

5 Restart the iTX Output Server machine when the wizard prompts you to.

The wizard takes a few minutes to complete the installation after the (final) restart.

Establishing a connection between TX Play and Xplay

TX Play controls the channel's schedule playout. So when TX Play encounters an XG event (graphics event) in the schedule, it communicates with Vertigo's Xplay using the Oxtel protocol to instruct Xplay to cue and take the page.

To establish a connection between TX Play and Xplay:

1 Open the **iTX Channel Config** dialog box by double-clicking the **TX Play Config** or **TX Play 2 Config** desktop icon.

2 Enable the **Integrated XG** setting.

3 Click **Save**.

Adding an XG Inside device to the Xmedia Server's Device Manager

For the Xmedia Server to publish assets to the Embedded Xmedia Server (EXMS) on the iTX Output Server, you must add an XG Inside device configuration profile to the Xmedia Server's Device Manager.

To add the XG Inside device to the Xmedia Server's Device Manager:

1 Open Xstudio on a client machine and ensure that it is connected to the Xmedia Server.

2 Select the **Tools**>**Device Manager** menu command.

The **Device Manager** window (Device Configuration) opens.

3 Select the **Add** button in the lower-left corner.

The **Device Configuration** section (lower portion) immediately changes to become the **Add Device Information** section.

4 Complete the fields to create a device configuration profile for the XG Inside device.

• Provide a **Name**, **Alias** and **Description** for the device (e.g. XGInside)

- Set the **Device Type** to **VertigoXG**.
- Set the **Control IP** to the IP address of the iTX Output Server hosting the XG Inside software components.
- Set the **Control Port** to **4000**.

5 Click **Apply** and then **Close**.

Enabling Auto-Publishing on the Templates, Pages and/or Scenes categories

To increase workflow efficiency and accuracy, we recommend that you set auto-publishing on the Xmedia Server's Templates, Pages and/or Scenes asset categories. This authorizes the Xmedia Server to automatically publish new or saved templates, pages and/or scenes from the Xmedia Server to the EXMS on the iTX Output Server.

> Note: You do not have to set auto-publishing for other asset types. If a template, page or scene uses an asset of another type (i.e. images or clips), the asset will be automatically published as part of the template/page/scene.

To set-up auto-publishing on the Templates, Pages and/or Scenes categories:

1 Open Xstudio on a client computer that is connected to the Xmedia Server.

2 Open the Asset Browser.

3 Right-click the **Templates** root category and select the **Properties** command.

   If you only want to auto-publish the contents of a sub-folder (rather than the root folder), simply navigate to the subfolder and right-click and select the **Properties** command.

4 Enable the output server(s) in the **Category Properties** window for which you want to be the recipients of the published assets (e.g. XGInside). Then click **OK**.

5 Repeat steps 3 and 4 for the **Pages** category and/or **Scenes** category.

> Note: If your system has multiple output servers and you do not want to publish all of the contents to all of the devices, create matching subcategories under both the Templates and Pages root categories, as well as the Scene root category, and then assign the different categories to different devices.

Installing and configuring the VertigoXG desktop plugin

The VertigoXG plugin is an iTX channel plugin that allows the scheduling of secondary graphics events that are inserted into the iTX Program stream by the XG Inside option installed on an iTX Playout Server.

This plugin adds the VertigoXG palette to the Content Selector on the Channel Control layout, which lets you create graphics pages based on Vertigo templates and then add the pages and/or scenes to the schedule or timeline. See Adding XG Events to an iTX schedule, on page 28 for more information.

> IMPORTANT
> To operate, the VertigoXG plugin requires that an iTX Integrated XG license be installed on the iTX Framework Server.

The following procedure assumes that you have already set up the channel configurations in the iTX Desktop.

To install and configure the Vertigo XG plugin on a machine hosting iTX Desktop:

1. Acquire and run the latest Vertigo Suite installer on the computer hosting the iTX Desktop that is connected to the iTX Playout Server with XG Inside.
2. When prompted by the installation wizard, select to install the **Vertigo iTX Desktop Plugin**.
3. Follow the wizard instructions and respond to the prompts to install all dependencies.
4. Restart the computer when the wizard prompts you to.

    The wizard takes a few minutes to complete the installation after the (final) restart.

To configure the VertigoXG Plugin for XG Inside operation:

1. In the iTX Desktop, select the **Engineering**>**Channel Configuration** view.
2. Select the channel.
3. Select the **Plugins**>**VertigoXG** tab and click the **Active** button to enable the Vertigo XG plugin.

    The **Active** button is a toggle for enabling (green LED) or disabling (grey LED) the Vertigo XG plugin.
4. Complete the following settings to associate the Vertigo XG plugin with the playout server:

Field	Description
Address	Enter the IP address of the playout server on which Xplay is running.
Port	**5006** is the port number on which iTX is to communicate with Xplay.
Output Channel	Currently not used.
Enable Slave Device	Enable this setting when a Master-Slave setup is used and the Master and Slave each have their own instance of an XG. If the Master-Slave channels share an instance of XG Inside, do not enable this setting on either of the channels. iTX will control the XG Inside system through TxPlay in the main channel only.

5 Configure the following settings to ensure the internal timing of XG events and automation commands:

Field	Description
Automation Delay (ms)	To ensure frame accuracy when using timestamps, iTX uses this value to determine how much earlier than the scheduled time *Take* and *Clear* commands should be sent. The default value of 500 ms should be sufficient when using XG Inside an iTX. If you still experience a latency, increase the value until it is resolved.
Enable TS Commands (XG Inside only)	When selected, the *Take* and *Clear* commands are sent to the XG as determined by the **Automation Delay (ms)** setting with a timestamp indicating when the command will execute. This approach compensates for small delays in communication with the XG and ensures frame accuracy.
OFF Delay (frames)	Specifies the number of frames prior to the end of the XG event that the *Clear* command will be triggered, so as to offer the page's *Default Out* animation a chance to playout. Although the default value is 0 frames, you must set this value to match the duration of the template's *Default Out* animation. NOTE: Since the OFF Delay value is fixed, all of your XG graphics templates must have the identical duration value for their *Default Out* animation. Otherwise, the animation may play beyond the XG event's duration.

6 Click **Save** and then **Close**.

Setting up XG Inside for Dual Channel or Simulcast playout

The following procedure identifies the tasks for installing and configuring the XG Inside option for dual channel (two independent channels) or simulcast (two channels sharing two inputs) playout on an iTX Playout Appliance 2.

Prerequisites

- Ensure that the following software is installed on the iTX Playout Appliance 2:
    - iTX v2.9
    - Vertigo Suite v5.2 (**ITXG Xmedia Suite Install** component)
- As a precaution, create a back up of the SQL database (EXMS) using the SQL Management Studio's Back-up menu command.

To install and configure XG Inside for dual channel or simulcast playout:

1 Close the iTX Service Controller window to stop all iTX services.

2 Double-click the **TX Play 2 Config** desktop icon to open the iTX Channel Config window.

3 Select either **Dual Channel** or **Simulcast** from the **Playout Type** drop-down list.

4 Provide a name for the first channel in the **Root Name** field.

5 Click the **Add Channel** button to add the second channel.

- If Dual Channel, type a channel name in the **New Channel Root Name** field that is different than the first channel's name and click **OK**.

- If Simulcast, type the same name as the first channel's name in the **New Channel Root Name** field, enable the **Simulcast** check box and click **OK**.

6 Enable the **Integrated XG** check box for both channels.

   a Select the first channel from the **Channel Name** drop-down list and enable the **Integrated XG** check box.

   b Select the second channel from the **Channel Name** drop-down list and enable the **Integrated XG** check box.

   c Click **Save**.

7 Open the **iTX Server Controller Configuration** window and verify that:

- Two Xplay services are listed; one suffixed for the first channel and the other suffixed for the second channel.

- Two Output Server services are listed; one whose parameter includes `-id A` for the first channel and `-id B` for the second channel.

8 Enable auto-publishing on the Xmedia Server's **Templates**, **Pages** and/or **Scenes** asset categories (page 9).

9 Install and configure the "Vertigo ITX Desktop plugin" on the client machine hosting the iTX Desktop application (page 10).

Setting up XG Inside for use with an external Vertigo XG

The following procedure provides instructions for installing and configuring the software components required to integrate iTX as an automation system driving the downstream Vertigo XG device. The Vertigo XG device's components must be configured to receive the program stream from the iTX Output Server and apply branding graphics as dictated by the iTX schedule before brought on air.

The iTX system and Vertigo system are setup and configured as they always are for a typical playout channel. As such, we recommend that you consult the *iTX System Administrator Guide* and the Vertigo Suite documentation for system installation and setup procedures.

To configure external Vertigo XG for iTX:

1 Configure Xplay's interface for multiple keyers and assign the Vertigo XG's localhost device (XG_CHA) to each keyer (page 13).

2 Configure Xplay's Automation settings and the automation protocol for the Vertigo XG device (page 8).

3 Add the Vertigo XG device to the central Xmedia Server's Device Manager (page 8).

4 Configure the Vertigo XG's Dashboard settings for automation (page 15).

5 Enable auto-publishing on the Xmedia Server's Templates, Pages and/or Scenes asset categories (page 9).

6 Install and configure the "Vertigo ITX Desktop plugin" on the client machine hosting the iTX Desktop application (page 10).

Configuring Xplay's keyers

When Vertigo XG units are factory-configured, a local XG_CHA device (XG_CHA and XG_CHB for dual channel devices) is defined in the Embedded Xmedia Server's (EXMS) Device Manager. Sometimes known as the localhost device, the XG_CHA device represents the actual Vertigo XG output channel.

The following procedures provide instructions for configuring Xplay's interface so that it can accommodate the independent control of the multiple keyers required to playout graphics on different layers on the playout channel. Once the keyers appear in Xplay, you can then assign the XG_CHA device to each of Xplay's keyers and put the keyers in a ready state for playout.

To configure Xplay's interface for multiple keyers:

1 Open Xplay and select **Tools**>**Settings**>**General** and set the **Layout** setting to **Multi-Device**.

2 In the **Number of devices** setting, specify the number of Vertigo XG keyers to be controlled by the iTX automation system. For this example, we use **9** keyers.

3 Select **Tools**>**Settings**>**Layout** and set the **Multi-Device Layout** setting to **PreviewOnAir**.

4 Click **OK** and then restart Xplay.

   When Xplay reopens it displays multiple Keyer windows along the right-side.

To assign the Vertigo XG's XG_CHA device to each of Xplay's keyers and put the keyers in a ready state:

1 With Xplay open, select the **Tools**>**Devices Manager** menu command.

   The **Device Manager** window (Device Configuration) opens with the **XG_CHA** device already listed in the table on the left-side.

2 In the right-side table in the Device Manager, click a <Device#> in the **Name** column to select the row.

3 Select the **XG_CHA** device (left table).

4 Click the right-arrow button .

   The XG_CHA device is immediately added to the table on the right. It is also added to the Keyer on the Xplay interface.

5 Repeat the steps 2 - 4 for each of the <Device#> in the table.
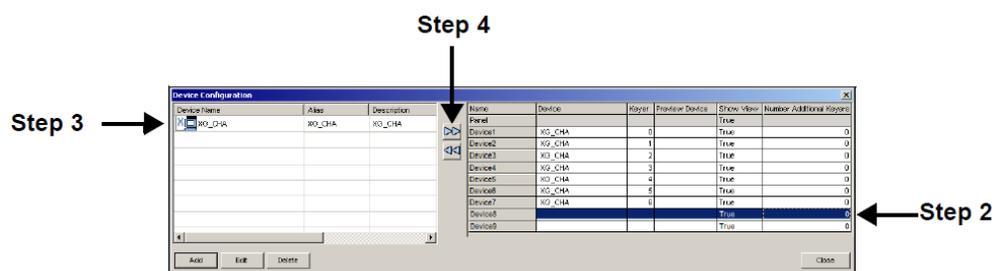
6 Click **Close**. The local device (XG_CHA) device is now associated with each keyer in Xplay.

7 Ensure that the Vertigo XG device is actively connected to Xplay.

As shown above, when Xplay is connected to the device, the LED is green. If Xplay is disconnected from the device, then the LED is red.

To reconnect Xplay to the Vertigo XG device, simply double-click the red LED. If the connection isn't immediately established, verify that the device is powered up and that the network is operating normally.

8 All of the keyers should be turned on, which is indicated by the background of the keyer's Device name being pink. If the background is grey, then the keyer is turned off. To turn the keyer on, right-click on the keyer's Device name and select the **Turn Keyer On** command.

Configuring Xplay to use automation to control the Vertigo XG

TX Play controls the channel's schedule playout. So when TX Play encounters an XG event (graphics event) in the schedule, it communicates with the Vertigo XG device's Xplay using the Oxtel automation protocol to instruct Xplay to cue and take the page or scene. To ensure proper communication between TX Play and Xplay, you must set Xplay's Automation settings and configure Xplay to use the Oxtel protocol over TCP/IP.

To configure Xplay's Automation settings:

1 Select the **Tools**>**Settings**>**Xplay**>**Automation** to display Xplay's Automation settings.

2 Enable the **Automation (No Message boxes)** setting, which overrides the behavior of the four settings below it and prevents message boxes from appearing during Xplay operations.

3 Leave the **Deadband** setting set to its default value.

4 Select from the **TV Format** setting's drop-down list the target TV format for the execution of automation commands and page creation. This is used to determine the number of frames per second and to display timecode values. This TV Format should match the TV Format of the templates that you build and the Rendering Resolution setting of the Vertigo XG device (see Configuring the Vertigo XG's Dashboard settings for automation, on page 15.

5 Click **OK**.

To configure Xplay to communicate with TX Play using the Oxtel protocol over TCP/IP:

1 Open Xplay's **Automation Configuration** window and create an instance of the Oxtel protocol for the Vertigo XG's local device (XG_CHA) that is to be controlled by TX Play.

   a Select **Tools>Configure Automation**.

     The **Xplay Automation Configuration** window appears.

   b In the **Device to protocol mappings** section, click the **Add Protocol** button next to the **XG_CHA** device.

   c Select **Oxtel over TCP/IP** from the drop-down list that appears and press **Enter**. Leave the Properties settings in their default state.

2 Click **OK** and restart Xplay.

3 Verify that the automation configuration has been applied to the Xplay device(s).

Once Xplay has been restarted, the keyers that have been configured for automation should now display the automation indicator in the keyer's toolbar. If there is no communication between the automation system and Xplay, the automation indicator

remains grey. However, when communication between the TX Play and Xplay is established, the automation indicator is displayed in blue.

Configuring the Vertigo XG's Dashboard settings for automation

There are a few settings in the Vertigo XG's Dashboard that must be configured to synchronize the Vertigo XG's rendering services with the video coming from the iTX Output Server, as well as to allow iTX automation to control the Vertigo XG.

The following procedure instructs you how to set the Vertigo XG's Automation settings:

To configure the Vertigo XG's Automation settings:

1 Open the Vertigo XG's Dashboard application by selecting the **Tools>Launch Dashboard** command from the Vertigo XG's Control Panel, which should already be open on the Vertigo XG's desktop.

2 Select the Vertigo XG device from the Device Discovery table. If the device does not appear in the table, perform a Device Discovery (**Tools>Settings>Device Discovery**).

3 With the **Settings Mode** still set to **Simple**, ensure that the **Output Resolution** setting is the same as the **TV Format** setting in the Xplay Automation settings ().

4 Change the **Settings Mode** by selecting **Advanced** from the drop-down list.

5 On the **Hardware>Genlock** page, set the Genlock settings particular to your iTX system.

6 Click the **Apply Changes** button and close the Dashboard application.

Using the Vertigo XG Plugin

Within the iTX Desktop, the VertigoXG plugin provides operators with access to Vertigo templates, pages and scenes stored on the Xmedia Server directly from within the iTX Desktop application. Operators can create a new page based on a template or open an existing page or scene for editing. The Vertigo graphics pages and scenes can then be added to the iTX channel's Schedule Grid or Timeline as secondary graphics events (XG type).

Summary

Vertigo XG Plugin overview

The VertigoXG plugin adds the **VertigoXG** palette to the **Content Selector** on the iTX Channel Control layout. The palette features two buttons (**Add Page** and **Remove Page**) and a selection pane.

Fig. 3-1: The VertigoXG palette in the iTX Desktop's Content Selector

> Note: The VertigoXG Palette uses the term "Page" for both Vertigo pages and scenes. For example, the Selection pane lists both pages and scenes, but the column heading is **Page Name**.

Clicking the **Add Page** button on the VertigoXG Palette opens the **VertigoXG Viewer**, which has two views: **Browse** and **Edit**.

- **Browse view** allows you to browse and/or search for templates, pages and/or scenes that currently exist on a specified Xmedia Server. See Browsing or searching for templates, pages or scenes on an Xmedia Server, on page 21 for more information.
- **Edit view** allows you to create a new page based on a template or open an existing page or scene for editing. You can then save the page or edited scene to the Xmedia Server and add the page/scene to the VertigoXG Palette's selection pane so that it can be added to the iTX schedule as an XG graphics event.

Connecting the VertigoXG Viewer to the Xmedia Server

The first time the VertigoXG Viewer is opened, you must set the IP address of the Xmedia Server in the **Hostname/IP** field of the **Settings** window. This allows the VertigoXG Viewer to access the templates, pages and scenes of a particular Xmedia Server device, as well as save new pages and scenes to the Xmedia Server.

Unable to connect to the Xmedia Server?

Each time the VertigoXG Viewer is opened, it verifies the connection to the Xmedia Server. An error message appears if the VertigoXG Viewer is unable to connect to the Xmedia Server.

To verify the current server settings:

1 Right-click the blue upper menu bar and select **Change Settings**.

The Settings window appears and displays the current settings.

- If the server settings are correct, verify that the Xmedia Server or network are working properly.

- If the server settings are incorrect, edit the required fields and click **OK**.

A message informs you that you must restart the client for the server settings changes to take effect.

Close the VertigoXG Viewer and then reopen it.
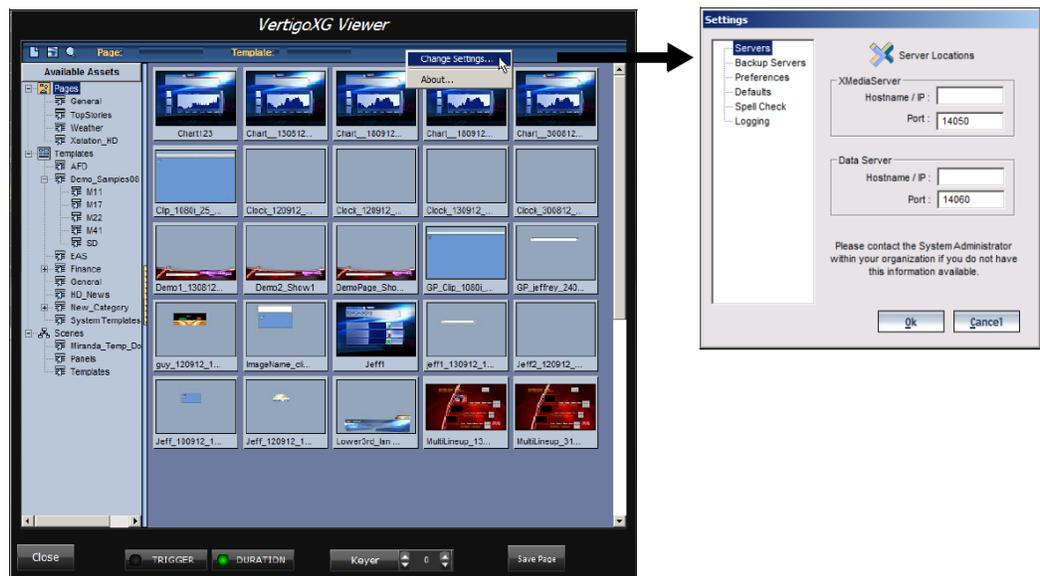
Overview for creating an XG Event

The following flowchart and the remaining sections of this chapter provide you with instructions for how to use the VertigoXG Palette and VertigoXG Viewer to create Vertigo graphics pages, edit pages and scenes and then add them to the iTX channel's Schedule Grid or Timeline as secondary graphics events.

Open the VertigoXG Palette in the Content Selector.

Is the desired page in the Selection pane?

Yes — Does the page need to be edited?

No — Will the event contain a page or a scene?

Yes (Does the page need to be edited?): Double-click the page in the Selection pane to open the page in the VertigoXG Viewer. Make any necessary edits to the page.

Click the Save Page button to add the page to the Selection pane on the VertigoXG palette.

No (Does the page need to be edited?): Drag the page from the Selection pane to the Schedule grid or Timeline.

Page (Will the event contain a page or a scene?): Open the VertigoXG Viewer and browse the Pages category of the Xmedia Server.

Does the page already exist on the Xmedia Server?

Yes — Open the page and make any necessary edits.

No — Browse the Templates category and open a template from which to create a new page. Edit the template's dynamic fields.

Click the Save Page button to add the page or scene to the Selection pane on the VertigoXG palette.

Scene (Will the event contain a page or a scene?): Open the VertigoXG Viewer and browse the Scenes category of the Xmedia Server.

Do you need to make edits to the scene?

Yes — Open the scene and make any necessary edits.*

No —

* When the scene is opened and edited from the VertigoXG Viewer, it is given a unique name, saved to the Xmedia Server as a new scene asset and added to the Selection pane as this new, unique scene.

Browsing or searching for templates, pages or scenes on an Xmedia Server

The VertigoXG Viewer's Browse view allows you to explore and display the template, page and scene assets currently stored on the specified Xmedia Server.

Use the Asset Browser to navigate through the Xmedia Server's Templates, Pages and Scenes categories, as well as their sub-categories. The contents of a selected category are displayed in the pane to the right of the Asset Browser.

The graphic below demonstrates that the selected category's assets can be displayed two view types, which is determined by the **Change the view** setting in the toolbar:

- **Detail View**: Displays the category's assets in a detailed list.
- **Proxy View**: Displays the category's assets as thumbnail images.

The **Startup View** setting in the VertigoXG Viewer's **Preferences** settings determines which view is used when the VertigoXG Viewer is initially opened in Browse view.

Fig. 3-2: Template, page and scene assets stored on the XMS can be displayed in Proxy or Detail View

Double-clicking the template, page or scene asset opens in the template/page/scene in the VertigoXG Viewer's Edit view.

If the VertigoXG Viewer opens in Edit view, you can switch to browse view by clicking the **Create new** toolbar button.

Another method for exploring and accessing template, page and scene assets stored on the specified Xmedia Server is to use the **Search** tool. The Search tool allows you build a search query based on asset properties like name, author or a date range. When a query is performed, the Search tool returns a list of the assets that match the search conditions. Like the VertigoXG Viewer's Browse view, the Search tool can display the results in Proxy View or Detail View.

Double-clicking the template, page or scene asset in the Search tool's results pane opens the template/page/scene in the VertigoXG Viewer's Edit view.

Although the Search tool can search and locate all asset types, only template, page and scene assets can be opened in the VertigoXG Viewer.

Creating a new page from a template

The Vertigo Suite workflow dictates that templates are created in Xstudio. Templates are designed so that the formatting, layout and some graphical elements are fixed (i.e. cannot be edited except in Xstudio).

In the XG & iTX integrated workflow, unique instances of the graphics, known as pages, can quickly and easily be created using the VertigoXG Viewer by changing dynamic content fields and saving the individual page asset.

> Note: While pages already exist on the Xmedia Server, you cannot create a new page from an existing page. In other words, there is no "Save Page As" functionality in the VertigoXG Viewer. You can only edit and save existing pages or create new pages from templates.
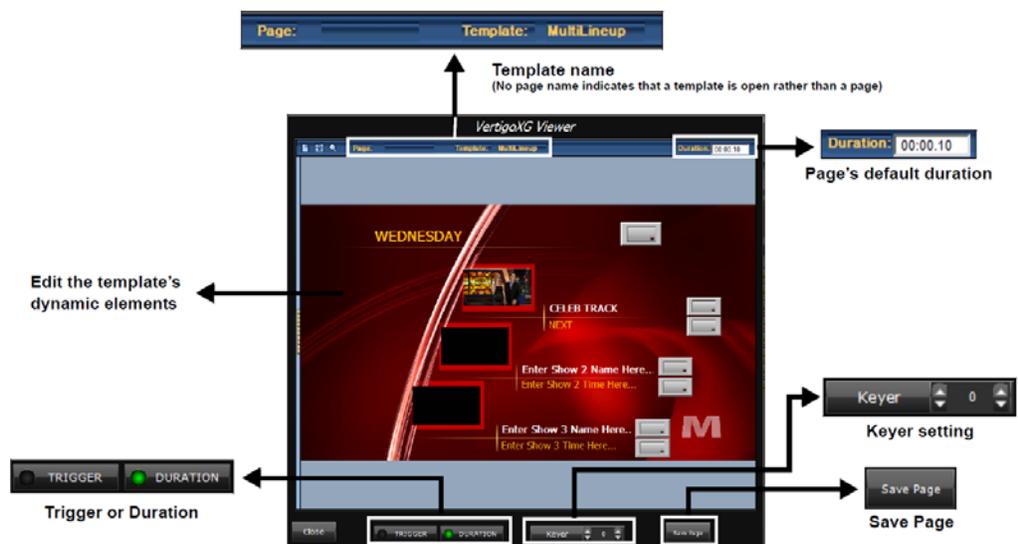

Fig. 3-3: Create a new page based on an existing template

To create a new page in the VertigoXG Viewer:

1 Open the template in the VertigoXG Viewer's Edit view.

2 Edit the template's dynamic fields.

   For example, you may be able to edit text fields, make selections from a drop-down list, or substitute an image, cel animation or clip asset displayed on the template.

   To substitute an image, cel animation or clip element on a template, right-click on the element. A browser for that asset type appears and displays the assets on the Xmedia Server that can be used as substitutes. Select a new asset and click **OK** to add it to the template.

3 In the **Duration** field, specify the page's *default duration*.

   The Duration setting in the VertigoXG Viewer is a property of the page and is therefore saved to the Xmedia Server with the page.

   When the page is first added to an XG event, the page's default duration value is used to set the initial duration for an XG event. The XG event's duration value can then be edited independently of the page's default Duration value. In other words, changing

the Duration value of an XG event does not change the page asset's default Duration value, and vice versa.

> Note: If the duration is set to 00:00:00, iTX imposes a default duration of 5 seconds when the page is added to a schedule as an XG event.

4 Set the **Trigger** or **Duration** mode, which represents the default method by which the graphics page will be cleared when it is part of an XG event.

- **Trigger**: The XG event will remain on air until another page replaces it or it is cleared in another manner (e.g. cleared using Xplay).
- **Duration**: The XG event will be cleared when its duration expires.

These modes are a property of the XG event in iTX, not the page asset itself in the Xmedia Server. Their settings are saved to the page element added to the VertigoXG Palette, but they are not saved as part of the page asset on the Xmedia Server.

When creating a new page, specify the default setting that will be used as the initial value when the page is added as an XG event. After the page reference has been added to the VertigoXG Palette, you can edit the default value by opening and editing these fields in the VertigoXG Viewer and then clicking the **Save Page** button. When the page is added to an XG event, the default value is used, but you can change it using the Event Editor.

5 In the **Keyer** setting, specify the *default keyer* that the page will playout on.

This value is used when the page is added to the VertigoXG Palette, as well as when adding an XG event in the schedule/timeline.

Note that this field is a property of the XG event, not the page asset itself. As such, the setting is saved to the page reference added to the VertigoXG Palette, but it is not saved as part of the page asset on the Xmedia Server.

When creating a new page, specify the default keyer setting that will be used as the initial value when the page is added as an XG event. After the page has been added to the VertigoXG Palette, you can edit the default value by opening and editing the page in the VertigoXG Viewer and then clicking the **Save Page** button. When the page is added to an XG event, the default value is used, but you can change it using the Event Editor.

6 Click the **Save Page** button.

The Save Page button creates the new page, saves the page to the Xmedia Server and adds a reference to the page element on the VertigoXG Palette's Selection pane.

- **Page name:** The new page is automatically given a unique name, which consists of the template's **AutoName** property (which defaults to the template's name) with a timestamp appended. You cannot rename the page using the VertigoXG Viewer.
- **Pages Category**: The VertigoXG Viewer looks for a category under the Pages root category that has the same name as the category under the Templates root category from which the template originated. If such a category is found, then the Page is saved there. Otherwise, the page is saved in the Pages root category.
- **Selection Pane listing**: A reference to the page is added to the VertigoXG Palette's Selection pane using the page's name. The pages are listed in the Selection pane in alphabetical order. In addition to the page's name, the page's default keyer value is also listed.

Adding a page to the VertigoXG palette

When creating a new page from a template, you will finish creating the new page by clicking the **Save Page** button. The Save Page button saves the new page to the Xmedia Server and adds a reference listing of the page (a page element) in the VertigoXG Palette's Selection pane.

Pages added to the Selection pane are listed alphabetically and consist of the page's name and its current default keyer value.

In reality, this listing is a reference to the page stored on the Xmedia Server. Therefore any changes saved to the page on the Xmedia Server are reflected in the page when it is opened from the Selection pane.

Pages can only be added to the Vertigo XG Palette's Selection pane by first opening the template/page in Edit view and then clicking the **Save Page** button. Adding a page is not permitted in the VertigoXG Viewer's Browse view.

Opening and editing an existing page in the VertigoXG Viewer

You can use the VertigoXG Viewer to edit existing pages that are saved on the Xmedia Server. Although there are various ways in which you can open the VertigoXG Viewer in Edit view, we recommend that you first add the page to the VertigoXG Palette's Selection pane and then open and edit the page from this state.

> Note: While pages already exist on the Xmedia Server, you cannot create a new page from an existing page. In other words, there is no "Save Page As" functionality in the VertigoXG Viewer. You can only edit and save existing pages or create new pages from templates.

To open and edit an existing page using the VertigoXG Viewer:

1 Open the page in the VertigoXG Viewer's Edit view.
2 Double-click the page's name listed in the VertigoXG Palette's Selection pane.

The page opens in the VertigoXG Viewer.

> Note: If the page does not open and an error message appears, verify the Server settings, the operational state of the Xmedia Server and/or whether the page still exists on the Xmedia Server.

3 Optional: Edit the page's dynamic fields.

You may want to edit text fields, make selections from a drop-down list, or substitute an image, cel animation or clip asset displayed on the page.

To substitute an image, cel animation or clip element on a page, right-click on the element. A browser for that asset type appears and displays the assets on the Xmedia Server that can be used as substitutes. Select a new asset and click **OK** to add it to the page.

> Note: Changes to a page's content will be saved to the Xmedia Server when
> you click Save Page. The page is a shared page, which means that saved
> changes will be reflected in all XG events that are already scheduled and
> associated with the page.

4 Optional: Edit the page's default **Duration** value.

Changes to a page's default Duration value will be saved to the Xmedia Server when
you click **Save Page**. As such, these changes will be reflected the next time you add the
page to an XG event. The duration value of XG events that are associated with the page
are not affected by changes to the page's default Duration value.

5 Optional: Edit the default **Keyer** value.

Changes to a page's default Keyer value are automatically reflected in the VertigoXG
Palette's Selection pane when you click **Save Page**.

Note that the default Keyer value is not saved with the page asset on the Xmedia
Server. However, the page's reference in the VertigoXG Palette holds the new keyer
value, so that when you open the page from the Selection Pane or add the page to a
new XG event, the new default Keyer value is used.

> Note: Changing the default Keyer value does not affect the current Keyer
> value of XG events already listed in the ITX schedule.

6 Optional: Edit the default **Trigger** or **Duration** mode settings.

Changes to a page's default Trigger or Duration mode settings are not saved with the
page asset on the Xmedia Server when you click **Save Page**.

> Note: Changing the default Trigger or Duration mode settings does not
> affect the current XG events already listed in the ITX schedule.

7 Click the **Save Page** button to commit any changes to the page.

Adding an unedited scene to the VertigoXG palette

If a scene that is stored on the Xmedia Server is intend to be played out on air "as is" (does
not require any edits), then we recommend using the following procedure to add the scene
to the VertigoXG Palette's Selection pane.

Making no edits to the scene allows you to add the scene to the Selection pane using the
scene's original name and content (as saved on the Xmedia Server). However, making edits
and then clicking the Save Page button, creates a new scene asset, which is given a unique
name, saved on the Xmedia Server and added to the Selection pane. See Creating a new
scene based on an existing scene, on page 27 for more information.

To open and add an existing scene to the VertigoXG Palette's Selection pane:

1 Click the **Add Page** button in the VertigoXG Palette to open the VertigoXG Viewer.

2 Browse the **Scene** category in the VertigoXG Viewer's Asset Browser.

3 Double-click the scene to open it in the VertigoXG Viewer's Edit view.

4 Do not edit the scene's content (dynamic elements) or the default Duration value.

Editing the content and/or the Duration value results in the creation of a new scene asset when the **Save Page** button is clicked, rather than applying the edits to the original scene.

5 Optional: Edit the default **Keyer** value.

Changes to a scene's default Keyer value are automatically reflected in the VertigoXG Palette's Selection pane when you click **Save Page**.

Note that the default Keyer value is not saved with the scene asset on the Xmedia Server. However, the scene's reference in the VertigoXG Palette holds the new keyer value, so that when you open the scene from the Selection pane or add the page to a new XG event, the new default Keyer value is used.

> Note: Changing the default Keyer value does not affect the current Keyer value of XG events already listed in the ITX schedule.

6 Optional: Edit the default **Trigger** or **Duration** mode settings.

Changes to a scene's default Trigger or Duration mode settings are not saved with the scene asset on the Xmedia Server when you click **Save Page**.

> Note: Changing the default Trigger or Duration mode settings does not affect the current XG events already listed in the ITX schedule.

7 Click the **Save Page** button to commit any changes to the scene. The scene is automatically added to the VertigoXG Palette's Selection pane.

> Note: After the scene has been added to the Selection pane using the Save Page button, the scene remains open in the VertigoXG Viewer. Any edits that are made to the scene while it's open in the VertigoXG Viewer will apply to the scene that was just added to the Selection pane. When the Save Page button is clicked, the changes will be saved to the current scene without creating a new scene.

Updating a scene already listed on the VertigoXG palette

If you want to update the content elements or properties of an existing scene asset, without creating a new scene asset, you must open the scene from the VertigoXG Palette's Selection pane. Once you have made the necessary edits, clicking the **Save Page** button saves the changes to the scene asset on the Xmedia Server and updates the scene's listing on the Selection pane.

To open and apply edits to an existing scene:

1 Double-click the scene's name in the VertigoXG Palette's Selection pane.

The scene opens in the VertigoXG Viewer's Edit view.

2 Optional: Make changes to any of the scene's dynamic content elements (e.g. change text or substitute image, clip or cel animation elements).

3 Optional: Edit the scene's default **Duration** value.

Changes to a scene's default Duration value will be saved to the Xmedia Server when you click **Save Page**. As such, these changes will be reflected the next time you add the

scene to an XG event. The duration value of XG events that are associated with the scene are not affected by changes to the scene's default Duration value.

4 Optional: Edit the default **Keyer** value.

Changes to a scene's default Keyer value are automatically reflected in the VertigoXG Palette's Selection pane when you click **Save Page**.

Note that the default Keyer value is not saved with the scene asset on the Xmedia Server. However, the scene's reference in the VertigoXG Palette holds the new keyer value, so that when you open the scene from the Selection pane or add the page to a new XG event, the new default Keyer value is used.

> Note: Changing the default Keyer value does not affect the current Keyer value of XG events already listed in the ITX schedule.

5 Optional: Edit the default **Trigger** or **Duration** mode settings.

Changes to a scene's default Trigger or Duration mode settings are not saved with the scene asset on the Xmedia Server when you click **Save Page**.

> Note: Changing the default Trigger or Duration mode settings does not affect the current XG events already listed in the ITX schedule.

6 Click the **Save Page** button to commit any changes to the scene. The edits are saved on the Xmedia Server and the scene is automatically updated on the VertigoXG Palette's Selection pane.

Creating a new scene based on an existing scene

The VertigoXG Viewer provides you with a "Save As" type functionality that allows you to create a new scene asset from an existing scene asset. The new scene is given a unique name, saved on the Xmedia Server and added to the Selection pane.

To create a new scene asset based on an existing scene:

1 Click the **Add Page** button in the VertigoXG Palette to open the VertigoXG Viewer.

2 Browse the **Scene** category in the VertigoXG Viewer's Asset Browser.

3 Double-click the scene to open it in the VertigoXG Viewer's Edit view.

4 Make changes to any of the scene's dynamic content elements (e.g. change text or substitute image, clip or cel animation elements).

5 Edit the scene's default **Duration** setting.

Changes to a scene's default Duration value will be saved to the Xmedia Server when you click **Save Page**. As such, these changes will be reflected the next time you add the scene to an XG event. The duration value of XG events that are associated with the scene are not affected by changes to the scene's default Duration value.

6 Optional: Edit the default **Keyer** value.

Changes to a scene's default Keyer value are automatically reflected in the VertigoXG Palette's Selection pane when you click **Save Page**.

Note that the default Keyer value is not saved with the scene asset on the Xmedia Server. However, the scene's reference in the VertigoXG Palette holds the new keyer

value, so that when you open the scene from the Selection pane or add the page to a new XG event, the new default Keyer value is used.

> Note: Changing the default Keyer value does not affect the current Keyer value of XG events already listed in the ITX schedule.

7 Optional: Edit the default **Trigger** or **Duration** mode settings.

Changes to a scene's default Trigger or Duration mode settings are not saved with the scene asset on the Xmedia Server when you click **Save Page**.

> Note: Changing the default Trigger or Duration mode settings does not affect the current XG events already listed in the ITX schedule.

8 Click the **Save Page** button.

A new scene asset is created, saved on the Xmedia Server and added to the Selection pane. The new asset is given a unique name, which consists of the name of the original scene with the date and time appended. If the original scene already had a date and time in its name, the date and time will be replaced.

> Note: After the new scene has been added to the Selection pane, the scene remains open in the VertigoXG Viewer. Any edits that are made to the scene while it's open in the VertigoXG Viewer will apply to the scene that was just added to the Selection pane. When the Save Page button is clicked the changes will be saved to the current scene without creating a new scene.

Adding XG Events to an iTX schedule

XG events are secondary events in a schedule that allow Vertigo graphics pages and scenes to be played out on a specified keyer layer.

You can add XG events to the iTX channel's schedule by either adding a page or scene to the Schedule Grid or to the Timeline.

The VertigoXG Palette uses the term "Page" for both Vertigo pages and scenes. For example, the Selection pane lists both pages and scenes, but the column heading is **Page Name**.

Adding an XG Event to the Schedule Grid

Once pages (Vertigo page and/or scene assets) are listed in the Vertigo XG palette, you can drag a page/scene from the Selection pane directly onto a primary event on the channel's Schedule Grid. This adds the page/scene as a secondary event of type XG. The page/scene's default duration value and default keyer value are used for the event's Duration and Keyer settings, but they can be edited directly in the Schedule Grid or using the Event Editor (see).

Adding an XG Event to the Timeline

In order to add a page/scene to the timeline, the timeline grid must be configured to display the XG keyer tracks. Selecting the **Select Tracks** button above the iTX Desktop's timeline allows you to select and display the XG Keyer tracks in the timeline.

Once the XG Keyer tracks are displayed on the timeline, you drag & drop a page/scene from the Vertigo XG palette's Selection pane onto the primary video track on the timeline. The page/scene is added to the appropriate XG keyer track as determined by the page/scene's keyer setting.

Editing the properties or content of a scheduled XG Event

When a page or scene is added to the iTX channel's Schedule Grid as an XG event, some of the event's properties, like Duration and Keyer, are initially set using the page/scene's default values.

You can edit the XG event's properties by selecting the XG event's row in the schedule and then selecting the **Event Editor** tab. The event's properties can be edited directly in the Event Editor and the changes applied by clicking the **Store Changes** button.

Clicking the **Edit Page** button opens the page/scene in the VertigoXG Viewer's Edit view. You can make content changes to the page that is currently assigned to the XG event. Once you have clicked the VertigoXG Viewer's **Save Page** button, changes to the page/scene are applied to the page/scene asset on the Xmedia Server, as well as to all XG events that are associated with that page/scene, even in other channel's schedules.

> Note: When an older schedule is loaded into the iTX Desktop, it may contain XG events that were authored using an older version of the VertigoXG plugin. If the **Edit Page** button is clicked for an older XG event, it will open the **Edit page** fields dialog, which only allows editing of text substitutions in a grid.
>
>
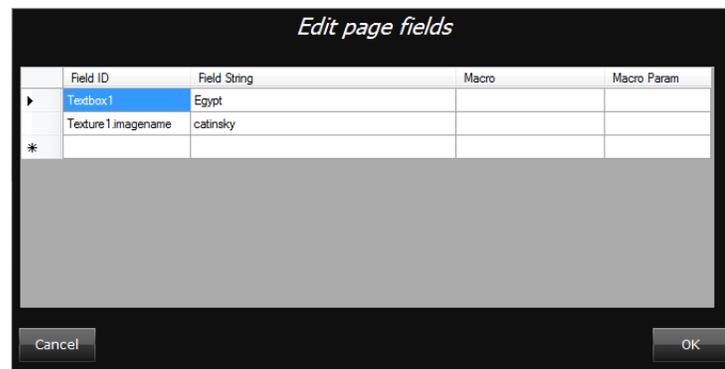
Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's Web site (www.grassvalley.com).

An online form for e-mail contact is also available from the Web site.

Corporate Head Office

Grass Valley
3499 Douglas-B.-Floreani
St-Laurent, Quebec H4S 2C6
Canada
Telephone: +1 514 333 1772
Fax: +1 514 333 9828
www.grassvalley.com