



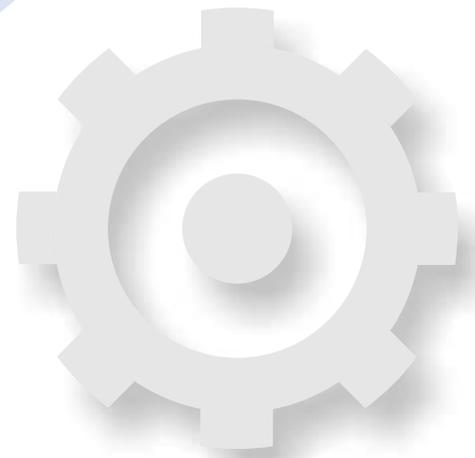
TELESTREAM



GraphicsFactory

Version 6.1

User's Guide



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FlipFactory and its various editions has been designed for professionals skilled in the art of digital media transformation and workflow automation, to facilitate the automation of complex media operations and workflow that require a multitude of input and output media formats, delivery to numerous types of media devices and file systems, and notification of media systems including broadcast automation systems and media asset management systems.

The FlipFactory architecture and user interface is designed to provide maximum flexibility in the setup and configuration of these complex media transformations and workflow. In providing this high degree of flexibility, it is possible for media transformation and workflow processes to be configured that are impractical, likely to result in unexpected or unintended results, or beyond the limits of FlipFactory to perform satisfactorily. Additionally, FlipFactory may be executed on a platform that lacks the performance or capacity to perform the media transformations and workflow you've configured, which is your responsibility to specify. Telestream has chosen to implement FlipFactory to provide the greatest flexibility without limiting its functionality to only those transformations and workflow that are known with certainty to be within its performance capabilities, including those limits imposed by the platform upon which you have installed FlipFactory.

Therefore, you acknowledge that you may create transformations and workflow that are impractical or beyond your FlipFactory installation's limits, and Telestream does not warrant that each transformation or workflow you specify or use will complete without error.

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Preface

SUPPORT AND INFORMATION

For assistance or information about Telestream or its products, please contact us via any of these methods:

Internet

Web Site. www.telestream.net

Technical Support. support@telestream.net

Licensing. license@telestream.net

Sales and Marketing. info@telestream.net

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HOW TO USE THIS GUIDE

This guide provides installation instructions for GraphicsFactory®, helps you get up and running quickly, and gain a high level understanding of how GraphicsFactory works. You may view or print this guide with Adobe Acrobat Reader. The guide is also available by selecting start > Programs > Telestream > GraphicsFactory > GraphicsFactory User's Guide. Appendices contain specification and capabilities information.



In addition to a table of contents, figures, and an index, this guide contains the following sections:

[Chapter 1, Introduction to GraphicsFactory](#)

This chapter describes the family of FlipFactory products. It also describes how to get started with FlipFactory.

[Chapter 2, Installing GraphicsFactory Tools](#)

This chapter describes how to download and install the GraphicsFactory Template Creator and Submit tool, and how to obtain and update your license in FlipFactory to enable GraphicsFactory features and capabilities.

[Chapter 3, Guided Tours](#)

This chapter offers guided tours of GraphicsFactory. In the first tour, you learn about the architecture and components of GraphicsFactory – how it is organized and how it works.

In the second tour, you'll launch GraphicsFactory Template Creator and preview a GraphicsFactory template, submit it with the Job Submission Tool and play the output video.

In the third tour, you'll build your own template to produce a Windows media file with graphics incorporated and play it. In the final tour, you'll learn about different GraphicsFactory workflows and advanced features. You can take all the tours in about an hour.

[Chapter 4, GraphicsFactory Workflows](#)

This chapter describes the GraphicsFactory Process/Analyze filter and the GraphicsFactory product filter, and describes various automation workflows and factory configurations to support them.



NOTATIONAL CONVENTIONS

The guide uses certain conventions used to make the guide more readable.

Notes, Tips & Cautions

Three special paragraphs are set in particular type with an icon to gain your attention in special circumstances:



Note

Notes highlight important information about the topic you're studying. Be sure to read this information before continuing.



Tip

Tips are bits of information you might not be aware of, or that make using GraphicsFactory easier.



Caution

A caution paragraph indicates an action that may cause potential loss of data, or other permanent changes to GraphicsFactory or your media assets.

TYPOGRAPHICAL CONVENTIONS

Certain typographical conventions are used as visual clues in this guide. Sample information, or a specific format to be used when entering information, is shown in italics, or in a courier-style font. For example:

Type your domain (*mydomain.com*) in the domain field.

Type `import FileName` where *FileName* is the fully-qualified path.

WE'D LIKE TO HEAR FROM YOU!

If you have comments or suggestions about improving this document, other Telestream documents, or our Web site – or if you've discovered an error or omission, please email us at support@telestream.net.





Introduction to GraphicsFactory

WELCOME TO GRAPHICSFACTORY!

GraphicsFactory® is a specialized, licensed version of FlipFactory you can use to quickly and efficiently create video with text, image, movie, and sound overlays.

UP AND RUNNING

To install GraphicsFactory tools and get up and running quickly, Telestream recommends the following steps:

- Step 1** Use “[Installing GraphicsFactory Tools](#)” on page 2–1 to install GraphicsFactory tools on your workstations, update FlipFactory servers for processing GraphicsFactory jobs, and obtain GraphicsFactory licenses from Telestream and install them.
- Step 2** Take the guided tours in [Chapter 3 “Guided Tours”](#) on page 3–1. In about an hour, you’ll learn how GraphicsFactory works and its components. You’ll also learn how to use the GraphicsFactory Template Creator to create templates and how to use the Job Submit application to submit GraphicsFactory jobs and monitor their progress.
- Step 3** Use [Chapter 4 “GraphicsFactory Workflows”](#) on page 4–1 and as a reference when building GraphicsFactory factories for transcoding your video with various overlays, and submitting jobs for GraphicsFactory processing.





Installing GraphicsFactory Tools

Use this chapter to download the GraphicsFactory® Tools installer which installs the GraphicsFactory Template Creator and the GraphicsFactory Submit tool. This chapter also describes how to obtain and update your FlipFactory server license to enable GraphicsFactory features.

Topics

- [Platform Requirements \(page 2-1\)](#)
- [Downloading the GraphicsFactory Tools Installer \(page 2-1\)](#)
- [Installing GraphicsFactory Tools \(page 2-2\)](#)
- [Obtaining and Installing the GraphicsFactory License \(page 2-3\)](#)

PLATFORM REQUIREMENTS

GraphicsFactory tools can be used on the FlipFactory server, or on computers other than the FlipFactory server itself. GraphicsFactory tools are compatible with these operating systems:

- Windows XP or XP Pro
- Windows 2003 Server

DOWNLOADING THE GRAPHICSFACTORY TOOLS INSTALLER

To obtain the installer from the Telestream Web site, follow these steps:

- Step 1** Use your Web browser to go to <http://www.telestream.net/flipfactory>.
- Step 2** If you're not registered, click to display the Register page. Complete the form and click Download FlipFactory. You can use your user name and password immediately. Telestream will email you a confirmation email.
- Step 3** Enter your authorized user name and password, then click Log In.
- Step 4** On the FlipFactory & GraphicsFactory Download page, click the current Version 6.1 link to display the FlipFactory Family Downloads page.



- Step 5** Click GraphicsFactory download link to display the GraphicsFactory Download page.
- Step 6** Click the GraphicsFactory installer for FlipFactory 6.1 to download and save the installer package.

INSTALLING GRAPHICSFACTORY TOOLS

When you run the GraphicsFactory installer, it performs the following:

- Creates a Telestream/GraphicsFactory directory
- Installs the GraphicsFactory Template Creator, Submit tool, and related files (DLLs, PDFs, etc.), along with samples.
- Creates Telestream > GraphicsFactory > GraphicsFactory Template Creator and Submit Tool entries in the Start > Programs list

Upgrading GraphicsFactory Tools

If you are using previous versions of GraphicsFactory tools, uninstall the them before installing the current version:

- Step 1** Make sure that you have exited both GraphicsFactory tools: Template Creator and Job Submit tool.
- Step 2** Click Start > Control Panel > Add or Remove Programs and select GraphicsFactory Creator.
- Step 3** Click Remove to uninstall the GraphicsFactory tools.
This action does not remove your templates or any media.

Installing GraphicsFactory Tools

To install the GraphicsFactory tools, follow these steps:

- Step 1** Run the GraphicsFactory installer (locally or from a server) and follow the steps in the installer:
- Step 2** The installer runs and displays the Welcome window:
- Step 3** **Welcome Window.** In the Welcome window, click Next to display the license agreement.
- Step 4** **License Terms.** Click Yes if you agree to the license terms. Click Next to continue.
- Step 5** **Customer Information.** Enter your user name and organization information, check Anyone or Only Me for using this application (Anyone is recommended) and click Next.
- Step 6** **Destination Folder.** Accept the default folder or click Change to select an alternate folder. Click Next to install the tools.
- Step 7** **Installation Wizard Completed.** Click Finish to exit the wizard.



OBTAINING AND INSTALLING THE GRAPHICSFACTORY LICENSE

Before you can begin using GraphicsFactory or take the tours in the GraphicsFactory User's Guide, you must obtain and install a GraphicsFactory license from Telestream.



Note

You can download and install GraphicsFactory tools without a license. However, you cannot perform GraphicsFactory processing or use the Template Creator without a license.

To use GraphicsFactory for evaluation, please send the licensing group an email request (see [Support and Information in About This Guide](#)).

Obtain the License

If you are evaluating GraphicsFactory, your license enables all of GraphicsFactory's features, and expires on the date shown in the feature section at the bottom of the email (usually 15 days from its start date).

If you registered with Telestream to download GraphicsFactory tools, Telestream verifies your customer information and emails you a no-cost demo license file, usually within one business day of registering. Demo licenses cause a watermark to be branded in your media.

If you are a current Telestream customer, log on to the Telestream Web site at <http://www.telestream.net/flipfactory> and click Obtain License to request a license file for GraphicsFactory.

Installing the License on a Workstation

If you installed GraphicsFactory tools on the GraphicsFactory server, proceed to Install or Update the FlipFactory License, below.

If you installed GraphicsFactory tools on a different computer than the GraphicsFactory server, follow these instructions to install the license for the GraphicsFactory tools:

- Step 1** Place the attached license.dat file in the GraphicsFactory License folder (default C:\Program Files\Telestream\GraphicsFactory\License).
- Step 2** Run the GraphicsFactory Template Creator to validate that your license is correct and is stored in the correct folder. If the Template Creator can't locate the license file or it is not a valid GraphicsFactory license, Template Creator displays a dialog to notify you of the problem.

Install or Update the FlipFactory Server License

If you installed GraphicsFactory tools on your FlipFactory server, you only need to install or update the license in the FlipFactory license folder.



When you receive the GraphicsFactory License File email, follow the steps in the email to install or update the license on each FlipFactory server you've licensed for GraphicsFactory:

- Step 1** Place the attached license.dat file in the FlipFactory license folder (default C:\Program Files\Telestream\FliFactory\License).
- Step 2** Restart your server before processing any jobs.



Guided Tours

GraphicsFactory is a template-driven, file-based graphics workflow automation and assembly system. GraphicsFactory allows you to assemble layers of images, QuickTime movies, text, audio files, and other elements, apply timeline effects, and merge the resulting graphics and audio into your video files during job processing.

The tours in this chapter will help you understand the concepts and features of GraphicsFactory.

Tour 1 describes GraphicsFactory components, how GraphicsFactory works. In Tours 2 and 3, you'll explore how to use the tools to create and apply graphics and how to submit GraphicsFactory jobs for processing.

Tours

- [\[Tour 1\] GraphicsFactory Introduction \(page 3-2\)](#)
- [\[Tour 2\] Flip Your First GraphicsFactory Video \(page 3-8\)](#)
- [\[Tour 3\] Creating a GraphicsFactory Template \(page 3-21\)](#)



Note

These tours build on your understanding of FlipFactory in general. If you're not already familiar with FlipFactory, you should take the tours in the FlipFactory User's Guide, Chapter 3, Guided Tours.

The file references in these tours assume you've installed GraphicsFactory in the default directory and your GraphicsFactory tools are on the GraphicsFactory server, which is referred to as localhost. If you've set up your system differently, make adjustments accordingly.



[TOUR 1] GRAPHICSFACTORY INTRODUCTION

In this tour, you'll become familiar with the concepts of GraphicsFactory and its design tool – Template Creator – plus the GraphicsFactory Submit tool, which you can use to submit GraphicsFactory jobs.

Concepts

GraphicsFactory enables editors to quickly and easily configure and assemble text, drop shadows, images, audio overlays, and QuickTime movies in a template.

These templates permit spatial positioning on the video frame and temporal placement on a timeline. Templates can be produced for a single job to produce video with graphics overlays. Or, you can mark properties of video or audio layers as dynamic, or “fill in the blank”, and submit several jobs – each with different values (images or text, for example) on different baseline video files.

GraphicsFactory is built on FlipFactory's transcode engine which automates media file transfer and exchange in a wide variety of workflows and formats.

After a template is built, it can be submitted to GraphicsFactory by various methods, along with the video to transcode the sources into an overlay video to meet your format and specifications.

Three key concepts are fundamental to understanding GraphicsFactory: layers, timeline effects, and variables. These concepts are demonstrated in the remaining tours.

Layers

A *layer* in GraphicsFactory is a single video or audio overlay element element, such as an image, text, audio overlay, QuickTime movie, etc. You can have multiple layers in a GraphicsFactory template. Each layer has its own properties – for example, text has properties including font, color, position, and the actual value of the text – the specific words that display on the output.

Layers are *ordered*, meaning that, similar to a stack of slide transparencies, each layer can be positioned either on top of or below other layers. Each visual layer also has varying opacity – it can be completely opaque (hiding everything underneath its element) – completely clear (rendering its element invisible) or anywhere in between. You also can control each audio layers loudness, from 0% (silent) to 400% (4 times louder than the original).

Timeline Effects

GraphicsFactory allows you to apply timeline-based (*temporal*) effects to layers, such as, “Fade in an image at this time”. Each effect is associated



with a point in time. Effects include the ability to fade layers in and out, or (for QuickTime and audio layers) the ability to start and stop the layer's media at specific times. Effect times can be relative to each other, such as, "Fade in this image two seconds before fading in this text".

Variables

Almost all properties of layers or effects can be controlled through the use of *variables*. A variable is a changeable (or dynamic) property of a layer or effect whose value is provided while the template is being applied. Said differently, if you mark a layer property as a variable, this allows you to "fill in the blank" for each job when the job is submitted for processing.



Note

Almost all layer properties can be controlled through the use of variables. For example, you can use variables to control the text to display, image positions, fade-in and fade-out times, etc.

For example, a template might specify the font, color, and position of text you want to display, but the template uses a variable to identify a holder for the actual text. By filling in the value of this text variable each time you submit a job for processing, the same template can be re-used on different videos, with a different overlay for each video.

Variables allow you to generalize a template. Variables allow you to re-use the same template for more than one job, without having to re-build the entire template. This reduces design labor and makes templates broadly applicable to a workflow. You don't need to use variables, but they are a powerful way to avoid doing everything "by hand" for each input file. For an example of how to use variables, see Tour 3.

Variables can be mixed with actual numbers and time code values in a formula, using + and - arithmetic operators. For example, you can specify a timeline effect by specifying `$starttime + 00:00:03:00@29.97 - $end_of_movie - $credit_length`.

You can also specify the X or Y location of elements. For example, for property value `$bottom - 20` allows the position of elements to change with each file.

Finally, you can use variable arithmetic when supplying filenames for overlays. For example: `"C:\images\" + $OVERLAY_FNAME + ".jpg"`.

Be sure to use arithmetic with proper types. In integer fields, only perform arithmetic on integers; in timecode fields, just use timecode values. For filenames, be sure to wrap any non-variable parts of the filename with quotes. For example: `"C:\Documents and Settings\"+$FILENAME`. If you are not using variables, you don't need quotes.



Components

GraphicsFactory consists of a specially-licensed FlipFactory that enables a sophisticated file-based graphics assembly and rendering engine, plus two additional tools – a template design tool (Template Creator) and a job submission tool (GraphicsFactory Submit Tool). You use all three to design and produce video with graphics overlays.

GraphicsFactory

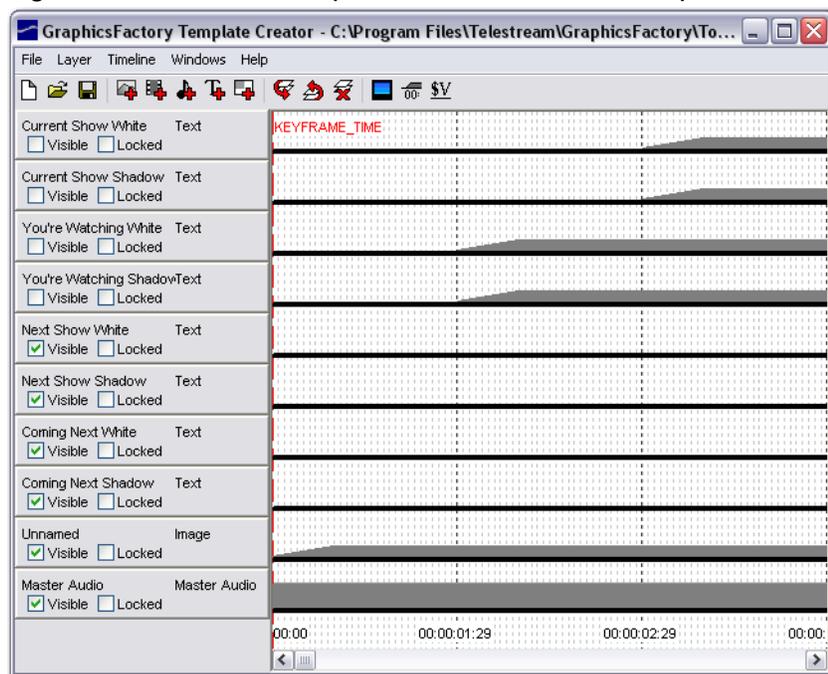
GraphicsFactory is a specially-licensed FlipFactory, which enables the processing of GraphicsFactory templates, images, text, audio overlays, QuickTime movies and other graphic objects to merge them with baseline video and audio both spatially and temporally.

You can process, transcode, and produce your overlay video and audio products using the formats and codecs that you have licensed.

Template Creator

The GraphicsFactory Template Creator is a Windows application that allows you to design and create graphics templates used to control how the video is generated. You can install the Template Creator directly on your FlipFactory server, or you can install it on another Windows computer – an editor's workstation, for example – on the same network.

Figure 3–1. Use the Template Creator to create templates



GraphicsFactory templates are XML documents that contain the specifications for how video and audio layers are overlaid on your output video, as specified using this creation tool.



You use the Template Creator to add graphics and audio elements and determine where they display on the video, plus other attributes (size, transparency, loudness). You also specify when they are visible or audible and when they disappear or become silent. Some graphic elements are files – raster images, for example. Others are just specifications of elements including text and darken regions, that are to be rendered when your job is processed.

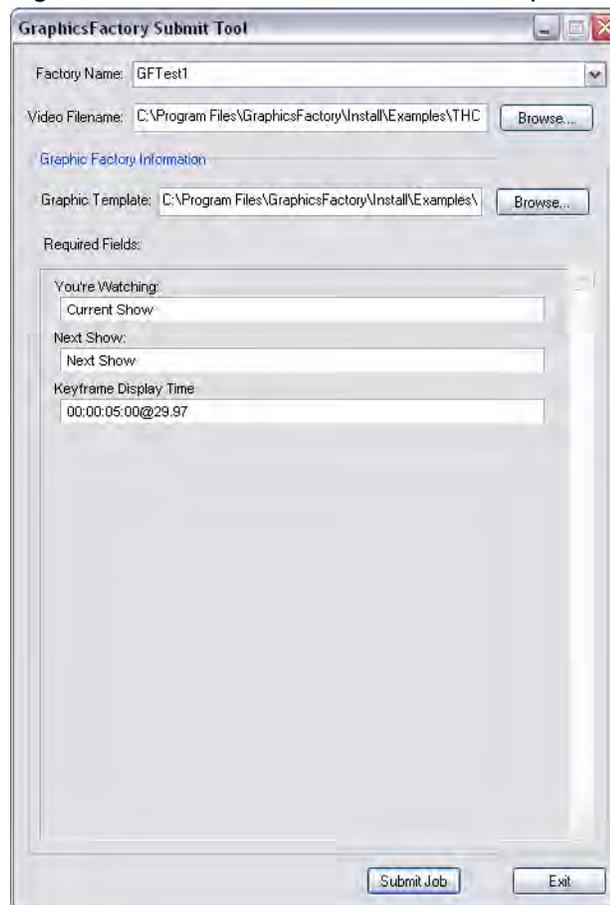
You don't specify the original input media in the Template Creator. The underlying media file is specified at job submission time. By keeping the underlying video and audio separate from the template, you can re-use the template in various workflows, with any media that you want.

GraphicsFactory Submit Tool

The Submit tool is also a Windows application. The Submit tool allows you to select a template and source video, then submit a FlipFactory job to the selected factory.

You can also install the Submit tool directly on your FlipFactory server or on another Windows computer on the same network.

Figure 3–2. Use the Submit tool to set up and submit a job



If your template uses variables (rather than specifically naming each value), the Submit tool allows you to override the default values for each variable – a show name, time, or other text, or a numeric value for graphics locations on the display, or timecodes, for example, as you submit your job.

GraphicsFactory Workflow

In order to process GraphicsFactory jobs, first you create a factory on your GraphicsFactory server. In this factory, you specify one or more output formats, and optionally, a GraphicsFactory template, depending on your workflow requirements.

Each job you submit to GraphicsFactory has several components:

- The GraphicsFactory template, which specifies layers and effects
- Optionally, GraphicsFactory variables which the operator uses to “fill in the blanks” of the template
- Optionally, links to one or more images, audio, and movies which form the composite layers
- The baseline video file upon which the elements are applied

These components may be provided in various ways. You’ll learn more about building templates with Template Creator in Tours 2 and 3.

There are several methods you can use to “fill in the blanks” for variables. You can provide specific values for each variable in the following ways:

- Use the GraphicsFactory Submit Tool, which allows you to do data entry for variables before sending the job to a GraphicsFactory server. Details are provided in Tour 2.
- Set up your GraphicsFactory factory with a monitor, to maintain a queue of pending GraphicsFactory jobs. Then, have an operator open each job and “fill in the blanks” using the GraphicsFactory Resubmit/Forward workflow. This workflow is described in [“Monitor/Manual Submission With Data Entry Workflow”](#) on page 4–14.
- Use automatically updated variables, such as \$DURATION or \$FILENAME, so that the entire workflow is completely automated.
- Through an SDK integration, variables can be populated automatically from a database. Contact Telestream for more information about the GraphicsFactory SDK.

All elements in a template – typically movies and images – must be accessible by the GraphicsFactory server. If you are using your own GraphicsFactory server (*localhost*) to create a template and submit the job, then this typically isn't an issue. However, if you are working on a LAN then you must make sure that all necessary files are network-accessible, and that GraphicsFactory has sufficient permissions to access those files. Details about how to attach network-accessible images and movies are provided in [“File Paths and Authentication”](#) on page 3–13.



The baseline media is the underlying foundation upon which GraphicsFactory elements are rendered. Your GraphicsFactory server can read over a hundred different video formats. There is no specific requirement as to which format you use for your input baseline media. You can choose the video to submit using either the GraphicsFactory Submit tool (Tour 2), or via a typical FlipFactory/GraphicsFactory workflow (“[GraphicsFactory Workflows](#)” on page 4–1).

Factories are configured by you to determine where video files should be imported from, how they should be processed, what output format(s) are required, and how the outputs should be delivered. You can find more information about setting up Factories in your FlipFactory User’s Guide. Aspects of factory settings which are specific to GraphicsFactory are discussed in “[GraphicsFactory Workflows](#)” on page 4–1.



[TOUR 2] FLIP YOUR FIRST GRAPHICSFACTORY VIDEO

This tour takes about half an hour, and acquaints you with the Template Creator and the Submit tool, using a sample GraphicsFactory template. In this tour, you'll also make a simple GraphicsFactory factory to process the template and video, and view the media in Windows Media Player.



Note

This tour is designed for you to select example files and submit a local job. Before you can participate in this tour, you should have GraphicsFactory and the GraphicsFactory Template Creator and Submit tool installed on a single server.

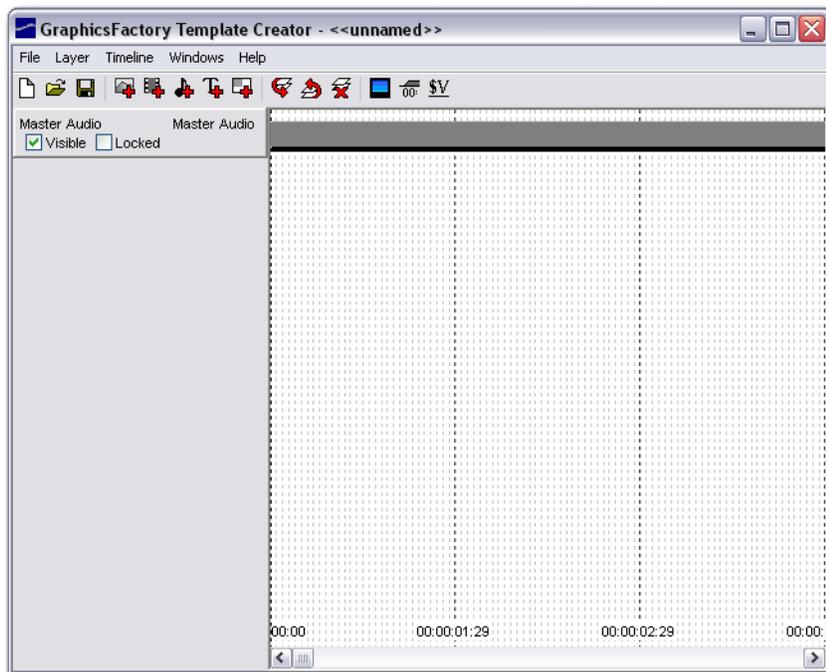
Start the Template Creator

To begin, run the GraphicsFactory Template Creator.

Click start > programs > Telestream > GraphicsFactory > GraphicsFactory Template Creator.

When Template Creator starts, it displays the main window:

Figure 3–3. Main Window of GraphicsFactory Template Creator



Recall from Tour 1 that the Template Creator's main window (Figure 3–3) has a menubar at the top, and a toolbar of frequently-used commands. There are other windows as well; you'll view these later in the tour.



Note

Online help for GraphicsFactory Template Creator provides specific details about each window, menu, and feature. To access online help click Help > Contents.

Directly below the toolbar on the left is the layer list (which is currently empty except for the master audio layer, because you just opened it). For each layer you create, an entry is made in this list. The list is displayed ordinarily, with the highest element in the layer stack at the top of the list. You can re-order layers in the list.

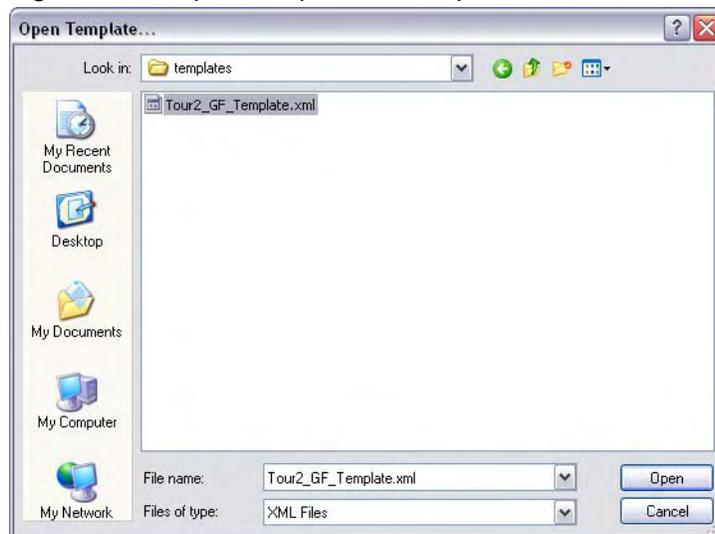
To the right is the timeline, which provides both an ordinal and temporal view of element layers and their effects. The timeline displays tick marks horizontally, and layers you've created vertically.

Open a Template

Next, open an example template we've already built for you.

Click File > Open Template to display the Open Template dialog.

Figure 3–4. Open template in Template Creator



Browse to C:\Program Files\Telestream\GraphicsFactory\Tour Examples, and open Tour2_GF_Template.xml.

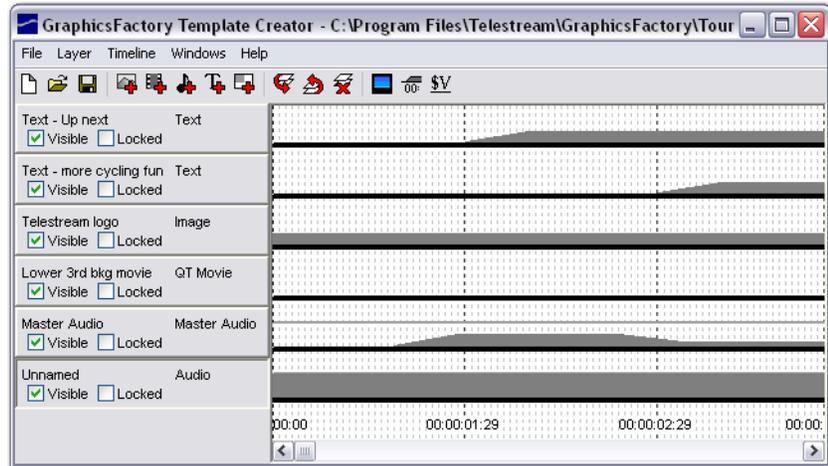
Explore the Main Window

With the template open in the main window, the element layers are displayed on the left, and the timeline is displayed on the right. For this



tour, don't make any changes to settings in the template (except for updating relative file paths, as instructed below).

Figure 3–5. Main window with open template



When you're done browsing around, you'll create a factory and submit this template for processing and view your new media.

To start, click on each menu in the menubar: File, Layer, Timeline, Windows, and Help. Use the File menu to create, open, and save templates. The Layer menu allows you to add new layers and re-order them. Use the Timeline menu to set a frame rate for this template.

The Windows menu enables you to display the other windows in Template Creator: Variable Editor, Template Preview window, and the Layer Effects Editor.

Below the toolbar on the left, each element in this template is displayed – one per layer. Each element has a name and type, plus a Visible and Locked checkbox.

Figure 3–6. Layer list entries



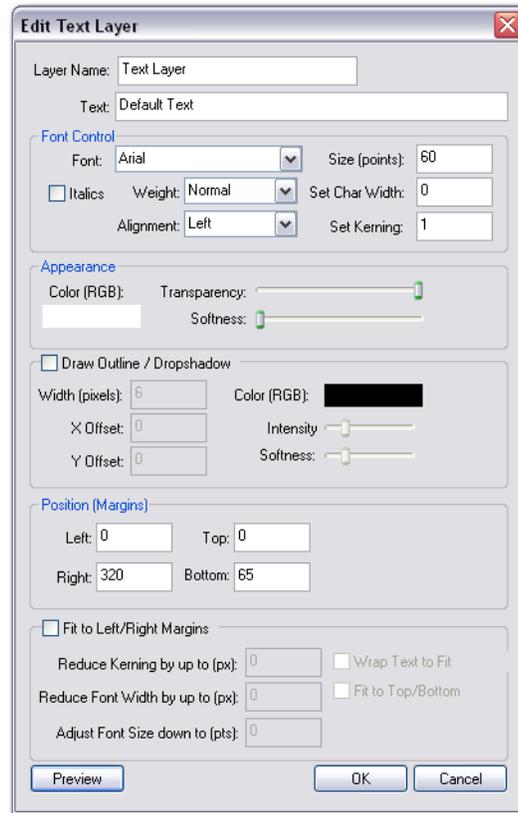
When selected, a layer displays as depressed. You can re-order the selected layer by repeatedly selecting Layer > Move Up or Move Down (or clicking the Move Up or Move Down icons in the toolbar).

To delete a layer, select it and select Layer > Delete (or click the red X in the toolbar).



Next, display a layer properties dialog to learn about some of these settings and configurations. Double-click the top layer (Text - Up next), which is a text layer.

Figure 3–7. Layer properties vary by type



Each type of layer has some unique properties. In general, you can provide the value of the layer (or the file name), its XY coordinate location on the image, plus size, transparency and other attributes.

Now, explore the other layer types – don't check any boxes or make other changes though. For example, open the Image layer and the QT Movie layer property dialogs and review the various properties, then close them by clicking the Cancel button.

Layer Types

The Template Creator provides the following layers:

Image Layer

An image layer is a raster image in JPG, PNG, BMP, TIF or TARGA format, plus size and position information, and opacity.

QuickTime Layer

A QuickTime layer is a reference to a QuickTime-compatible movie file (AVI, MOV, etc.), plus information about the image size, position and



opacity, and looping. QuickTime movies allow you to create dynamic graphics (snipes) and movie insets as graphics.



Note

The QuickTime layer only overlays the video, not the audio, from the QuickTime file. You can use an Audio Layer to overlay the audio from a QuickTime file; if you want both video and audio, each is in a separate layer, allowing you to control them individually.

Text Layer

A text layer is a specific text string (or a variable that resolves to a specific string when the job is submitted) to be rendered on the output media. In addition, you can set attributes including extensive font, character, and paragraph control, plus drop shadows.

Darken Region Layer

A darken region layer is a rectangular region at a specific location and size, plus opacity, that effectively reduces the luminance of all the lower layers, including the baseline video.

You can use Darken Region layers to darken a rectangular area on the image where you plan to display text or a QuickTime movie.

Audio Layer

An audio layer specifies a sound file in WAV, QuickTime, or MP3 format, plus the ability to map audio channels to output channels. You can add fade-in and fade-out effects to control volume on a layer basis.

Master Audio Layer

A master audio layer is automatically inserted in each template. You can use it to control the volume level of the baseline audio, by adding fade-in and fade-out effects, and adjusting their duration and target intensity.

**Note**

The Master Audio layer controls the levels of only the original baseline audio from your source media, and does not affect any other audio layers. For example, you might use the Master Audio layer to fade out the original audio, while fading in a new Audio layer containing a voice-over.



File Paths and Authentication

GraphicsFactory uses file-based resources including templates (in XML format), plus raster image files including BMP, PNG, etc. and QuickTime movie files as graphic element resources. Additionally, you can specify audio files in MP3, WAV, or QuickTime. Baseline video (in any FlipFactory-supported format) is also specified as a file.

Each of these files must be accessible to the GraphicsFactory server that is processing the job.

If your reference files (in Template Creator as well as Submit tool) are on the GraphicsFactory server, use fully-qualified Windows paths to the files. If your reference files are on shares accessed by the GraphicsFactory server or if you're using a FlipFactory Array or Load-Balance group, you should reference the various files as fully-qualified UNC paths, because these references must be resolved from the perspective of the network-based GraphicsFactory server. Relative and drive-letter paths won't be correctly specified from the GraphicsFactory server's location if the template is being designed on another computer.

Server-based files must be in a share that is accessible to GraphicsFactory as well as the Template Creator and Submit tool. They should also be specified as full UNC paths (`\\imageshare\image\logo.png`, for example), instead of using mapped drives: `S:\logo.png`.



Note

When submitting GraphicsFactory jobs to a FlipFactory on the LAN, file references should be fully-qualified UNC paths, starting with a Windows server name (`\\SierraServer`, for example).

Update the Paths

Before continuing, you need to update two file references in the template which have specifically been entered as relative, so that they work in all installations. You need to update them to local, fully-qualified paths on your computer.

In the Template Creator, double-click the Telestream logo image layer to display its property dialog.

Click the Browse button to locate and select the `tel_logo_stack.png` file in (default installation path) `C:\Program Files\Telestream\GraphicsFactory\Tour Examples\tel_logo_stack.png` and click Open.

Click OK to save the settings with the fully-qualified path to this logo.

Next, double-click the *Lower 3rd bkg movie* QuickTime layer to display its property dialog.

Click the Browse button to locate and select the NT Telestream Blue Lower 3rd CIRCLES.mov file in (default installation path) `C:\Program Files\Telestream\GraphicsFactory`



\Tour Examples\NT Telestream Blue Lower 3rd CIRCLES.mov and click Open.

Click OK to save the settings with the fully-qualified path to this movie.

Click File > Save Template to save the changes and continue.

Previewing a Template

Now that you're familiar with the main window and the building blocks of a template, select Windows > Template Preview window.

Figure 3–8. Template Preview window



The Preview window provides you a visual overview of all graphic elements without the baseline video so that you can get a visual sense of how it will look when rendered.

First, click the View menu and select several backgrounds, and also display the Video/Text Safe guide and the Rule of Thirds guide to get a quick sense of how each feature works.

Next, click the Size menu and select various preview sizes. You can set the preview window to display in NTSC, PAL, and HD 720 and 1080 formats. Also, you can set your own preview size.

These sizes do not control the output. Rather, the output is set in Product area of the GraphicsFactory factory you set up, and you should set the Preview size to the size of output you're planning. A GraphicsFactory template is generally designed to fit a particular frame size (e.g.: 720x480 for NTSC). In the Size menu, you can also preview the template at full-size (100%), half-size (50%) or quarter-size (25%).



In the Template Preview window, you can see the spatial positioning of the elements, and you can also preview the template timeline.



Note

You can also display Layer properties dialogs directly from the Template Preview window. Double click any object to display its property dialog. If an element (such as a QuickTime movie) completely fills the window, then clicking anywhere in the window will select that element unless another element is on top of it. So, consider putting full-screen elements at the bottom of the layer stack if possible.

Play the Template

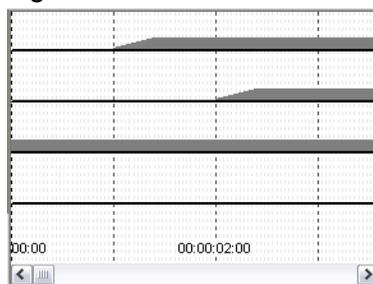
Finally, click Preview > Play and watch the template step through the visual effects to get a sense of how the elements will play out. You can also display time codes (Preview > Show timecode during Play).

When you click Play, you can see the template fade the text in and out. This allows you to see how the template will appear when applied to a video. (To stop playing the preview at any time, just click directly in the Preview window.) But how do you know when elements *should* fade in and out? For that, you use the Timeline in the main window.

Using the Timeline

The timeline is where effects, such as “fade in” or “stop QuickTime movie” are applied to the layers. The timeline is located to the right of the layers list in the Template Creator’s main window.

Figure 3–9. Timeline in main window



You can navigate the timeline in several ways:

- Use the scroll bar at the bottom of the screen
- Use the mouse scroll wheel to zoom in and out
- Left-click and drag on the timeline to move the timeline

Events on the timeline are driven by timecodes, such as “00:00:01:00@29.97”. More detail is provide about creating effects in Tour 3, but its important to place the frame rate at the end of the timecode.



Build a GraphicsFactory Factory

Even though two timecodes with different frame rates can mean the same time – 00:00:10:00@29.97 and 00:00:10:00@25 are the same – it's useful to change the tick frequency in the timeline display. To change the duration, click the Timeline menu, and select NTSC (29.97 fps), PAL (25 fps), or define your own custom frame rate. This setting is used to determine the appropriate timeline basis when you click to add effects on the timeline.

Before building your first GraphicsFactory factory, be sure to save the template with your updated file paths, and continue. You can quit the Template Creator program if you choose to.

Before you can submit a GraphicsFactory job, you need to build a factory. Here are the specifications for your factory:

- Product: Windows Media – (name: WMV720X480) Single Rate CBR, 720 x 480, 2 MB/sec @ 29.97 FPS.
- Destination: Local Folder (suggested path: C:\Program Files\GraphicsFactory\Tour Examples).

Open the FlipFactory console, log in to the Demo account and create a new factory (called *WMV_GFTours*). Add the product and destination and save the factory.



Note

For complete details about building and configuring factories in FlipFactory, see the FlipFactory User's Guide.

Submit a Job

Now that you've updated the template and created the factory, you're ready to run Submit Tool, review the Submit Job window and its important input fields, and submit your first job. The factory you created doesn't have a monitor, so you'll submit the job manually, using the GraphicsFactory Submit tool.

Run the GraphicsFactory Submit Tool: double-click the shortcut on your desktop, or select start > Program Files > Telestream > GraphicsFactory > GraphicsFactory Submit Tool.

When it starts, the Submit Tool displays the connection dialog:

Figure 3–10. Connect to FlipFactory in Submit tool



The GraphicsFactory defaults to *localhost*, which is correct for this tour. (You can type the name of any FlipFactory server in your environment.) Click **Connect** to connect to the GraphicsFactory running on your server. When the Account list populates and the **Log In** button activates, you've successfully connected.

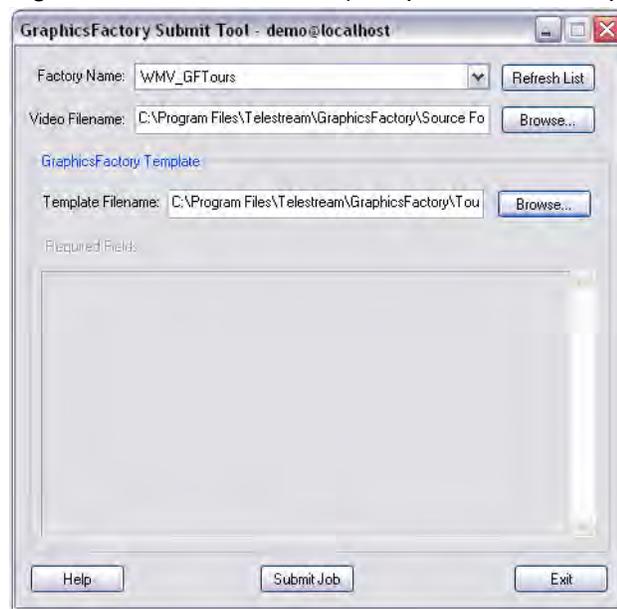
Figure 3–11. Log in to the demo account



Select *demo* from the FlipFactory account menu and click **Log In**.

When you've successfully logged into an account on the connected FlipFactory server, the **Submit** tool displays this window.

Figure 3–12. Submit tool (sample, shown completed)



In the main window, select **WMV_GFTours** from list of factories (this is the factory you just created on the GraphicsFactory server.)

Next, click the **Video Filename Browse** button and select your baseline video (`C:\Program Files\GraphicsFactory\Source Footage\Source_Video.wmv`), a 30-second clip.

Finally, click the **Template Filename Browse** button and select the `Tour2_GF_Template XML` template file (`C:\Program`



Files\GraphicsFactory\> Tour Examples\Tour2_GF_Template.xml)
 you've been exploring.



Note

Click Help to view Online Help for GraphicsFactory Submit Tool.

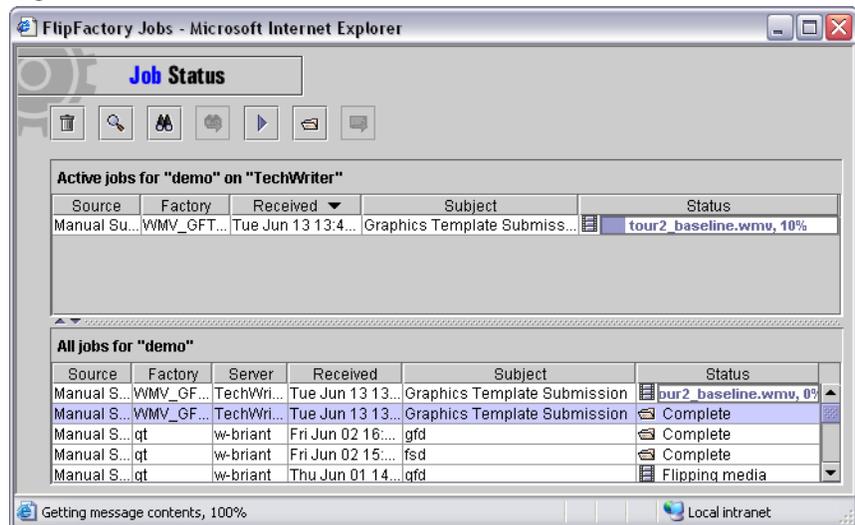
Click Submit Job to send the template and the file reference to the baseline video you selected to the WMV_GFTours factory on your local FlipFactory server, then close the Submit tool by clicking Exit.

View Job Status

To view the Status of the job you just submitted, run the FlipFactory console again (if its not already running) and log on to the demo account.

Click the Job Status icon (located in the User panel). FlipFactory displays the Job Status window.

Figure 3–13. Job Status window



The Job Status window displays jobs that are in progress in the upper (Active Jobs) panel, and jobs that have been completed in the lower (All Jobs) panel. You click a job to select and manage it, or double-click it to view job details in the Message Viewer window.



Play Your New Clip

When the job is complete the media has been transcoded to Windows Media, and you can view your new clip. Double-click the job in the Job Status window All Jobs panel to display the Message Viewer window.

Figure 3–14. Message Viewer window



The Message Viewer window displays details about each product (new media file) in the job. The new media was delivered to the Local Folder destination you specified.

Open the destination folder (C:\Program Files\Telestream\GraphicsFactory\Tour Examples) and open the media



file Source_VideoWMV720x480.wmv in Windows Media Player by double-clicking it.

Figure 3–15. Windows Media Player plays the media you flipped



footage courtesy of:
another DOT production
www.anotherDOTproduction.com

Conclusion

Now that you've reviewed a template, learned the basics of how to use GraphicsFactory Template Creator, and learned how to submit and monitor jobs, you're ready to build a Graphics template from scratch and process another GraphicsFactory job.



[TOUR 3] CREATING A GRAPHICSFACTORY TEMPLATE

This tour takes about 15 to 20 minutes. In this tour, you'll create a template from scratch, duplicating the template from Tour 2. You'll use the same factory to process the template and video, and view the output media in Windows Media Player.

In this tour, you'll learn how to create the "Coming Next" template from scratch. In the process, you'll have an opportunity to use most of the features in the Template Creator.



Note

The instructions in this tour assume that you have taken Tour 1 and Tour 2, and have learned the menu items and toolbar, how to display dialogs and the other windows in Template Creator. If you need help using the user interface, display Online Help.

Create a Template

To create the Coming Next template, follow these steps:

- Step 1** Start the Template Creator if you don't already have it open. (If it is, select File > New, and close any open templates.) When you start the Template Creator, a new template is created for you automatically.
- Step 2** Save the new, blank template in Program Files > GraphicsFactory > Tour Examples as *MyUpNextTemplate.xml*.
- Step 3** Display the Template Preview Window (select Windows > Template Preview Window) so you can lay the elements out. Drag it to one side if necessary so you don't obscure the main window. Display the Rule of Thirds and Video/Text Safe guides (via View menu).
- Step 4** Now, return to the main window and begin adding layers to the template.
- Step 5** First, add a QuickTime layer: click Add QuickTime Layer and double-click the layer to view properties.

Set up the following properties:

Name the layer *Telestream movie*.

Click Browse (the button with the ellipses on it...) and navigate to C:\Program Files\Telestream\GraphicsFactory\Tour Examples and select *NT Telestream Blue Lower 3rd CIRCLES.mov*.

Check Looping, so the movie repeats as long as the baseline video runs. Click Adjust Preview Frame and select the frame you'd like to view in the Preview window. (Note the Preview button here, too). Click OK.



In the Template Preview window, move the movie rectangle to the bottom left of the window. You move the rectangle by grabbing the grab button (a small black square in the center of the object) and dragging the rectangle to its target location.

Next, adjust the size of the rectangle to fill the window by dragging the right and top edges. This effectively sets the X and Y point to 0,0, and the size to 720 by 480 – close and open the QT Movie property dialog again to refresh the settings and verify the values, adjusting them as necessary. (You can also just edit the values in the dialog, of course.) Close the Edit QuickTime Layer dialog and continue.



Note

When you're done setting up a specific element, it's a good idea to lock it (click Locked in the layer). When an element is locked, you can't make changes, and it doesn't prevent you from selecting elements below it in the Template Preview window.

You can also use the Visible checkbox to hide and show elements during your design work.

-
- Step 6** Add a text layer for “Up Next”. Click Layer > Add Text Layer or use the toolbar icon.
- Step 7** Click to select the layer and move it to the top of the layer stack (click Layer > Move Up or click the Move Up icon in the toolbar).
- Step 8** Open the properties dialog and name the layer “Up Next”, add the value “Up Next:”, select a font (Arial is suggested), set the color to white (or other color you choose - click in the color box to display the color picker) and click OK.

In the Template Preview window, drag the Up Next rectangle to the bottom left just inside the yellow guide line and just below the swoosh (at about 35, 360. Now, lock the layer. (When a layer is locked, you can't open the property dialog.) Save your template changes.

- Step 9** Add a text layer for the name of the next TV show. Click Layer > Add Text Layer, then move it to the top of the stack.
- Step 10** Double-click to display the new text layer's property dialog.

Name the layer “Show Name”. But instead of specifying the value “more cycling fun...”, make the template general purpose by adding a variable so it can be used repeatedly. Enter `$ShowName` in the text field. By putting the symbol \$ in front of `ShowName`, you have created a new variable called “ShowName:”. (When you enter a new variable, it creates it automatically. You'll supply the actual text to render on this layer, when you submit the job.) Select the font, set the color to white, text size to 48.



- Step 11** To create a shadow for the Up Next text, check Draw Outline / Drop shadow. Set the pixel width to 4, and the X and Y offsets to 5. Select black as the color.
- Step 12** Next, review the text and drop shadow in the preview window and make adjustments to suit your taste. When you're satisfied with the look, click OK to close the Edit Text Layer window and save the settings.
- Step 13** Now, add default text to the variable. Click Window > Variable Editor to display the Variable Editor window.



Note

You should always provide default values and data entry instructions for each variable you create. If you don't, the rectangle doesn't display in the Template Preview window, and it makes it more difficult for data entry during job submission.

The Variable Editor window displays a list of all variables you've created in this template. Select \$ShowName and enter *ShowName* in the Default Value text field. Enter *Type the name of the next show* in the Data Entry Instructions field. Then, close the window.

In the Template Preview window, drag the \$ShowName rectangle just below the Up Next element. Save changes and lock the layer.

- Step 14** The final element to add is the Telestream logo. Add an image layer, move it up above the QT Movie layer (so it displays correctly and you can move it around in the Template Preview window) and display the properties dialog.

Name the layer Logo, then select the Telestream logo (C:\Program Files\Telestream\GraphicsFactory\Tour Examples\tel_logo_stack.png).

Set the size to 115 wide, 76 high. (You need to know the size of images and QuickTime movies and set them manually.)

In the Template Preview window, move the logo rectangle to the lower right corner, just inside the red rectangle corner.

Save the template.



Adding Timeline Events

Now that you've added the elements and have them set spatially, you'll adjust the temporal settings so that they fade in and out at the appropriate times.

- Step 15** To set up times for each element, open the Layer Effects Editor window (Windows > Layer Effects Editor).
- Select the Up Next layer, and click Add in the Layer Effects Editor window. Set the Fade In time to 00:00:01:00@29.97 (1 second).
- Click Add again and set the effect type to Fade Out. Set the Fade Out time to 00:00:10:00@29.97 (10 seconds).
- Step 16** Select the Show Name layer, add a Fade In and a Fade Out, and set the times to 00:00:03:00@29.97 and 00:00:10:00@29.97, respectively.
- Step 17** The logo should display during the entire run of the video, so you don't need to add any effects. By default, elements are visible unless effects are applied.



Tip

You can use the timeline as a visual guide – a layer that is visible displays a thick grey bar above the layer timeline and, if it is a Quicktime or Audio layer, the media is playable, the black layer timeline bar is thicker during play time, thin when stopped.

- Step 18** Select the Telestream movie layer, add a QuickTime Movie Start at 00:00:00:00@29.97 and add a QuickTime Movie End at 00:00:12:00@29.97.
- Also add a Fade In at 00:00:00:00@29.97 and add a Fade Out at 00:00:12:00@29.97.
- Step 19** Save the template and play the preview (Preview > Play) to see how the effects play out. If you've made any errors, correct them now and re-play the preview.

Submit a Job

Now you're ready to submit the job. You'll use the GraphicsFactory Submit tool to submit the job to the same factory you created in Tour 2.

- Step 20** Launch the Submit tool and connect to your GraphicsFactory server using *localhost*.
- Step 21** When you connect, select *demo* from the FlipFactory account menu and click Log In.
- The Submit tool displays its window.
- Step 22** In the main window, select WMV_GFTours from list of factories (this is the factory you created in Tour 2.)



- Step 23** Next, click **Browse** and select the same baseline video (C:\Program Files\GraphicsFactory\Source Footage\Source_Video.wmv).
- Step 24** Click **Browse** and select the *MyUpNextTemplate* file (C:\Program Files\GraphicsFactory\Tour Examples\MyUpNextTemplate.xml) you just created.
- Step 25** Click **Submit Job** to send the template and references to the baseline video to the WMV_GFTours factory on your local FlipFactory server, then close the **Submit** tool by clicking **Exit**.

View Job Status

To view the Status of the job you just submitted, click **Job Status** (located in the User panel). FlipFactory displays the Job Status window.

Play Your New Clip

When the job is complete the media has been transcoded to Windows Media, and you can view your new clip. Double-click the job in the All Jobs panel of the Job Status window to display the Message Viewer window and details about each product (new media file) in the job.

The new media was delivered to the local folder destination you specified, and you can click the **Play** icon (right arrow) to play the clip in Windows Media Player.

Conclusion

You've just created your first GraphicsFactory template and in the process, gained some first-hand experience with the GraphicsFactory Template Creator. Now you're ready to try it on your own.





GraphicsFactory Workflows

This chapter describes how to set up and configure GraphicsFactory to facilitate various workflow requirements.

Topics

- [GraphicsFactory PA Tools and Filters \(page 4-2\)](#)
- [GraphicsFactory PA Tool \(page 4-2\)](#)
- [Media Expansion PA Tool \(page 4-5\)](#)
- [GraphicsFactory Template Filter \(page 4-8\)](#)
- [GraphicsFactory Submit Tool Job Submission Workflow \(page 4-10\)](#)
- [FlipFactory Monitor/Manual Submission Workflow \(page 4-12\)](#)
- [Monitor/Manual Submission With Data Entry Workflow \(page 4-14\)](#)
- [Workflow Variations \(page 4-19\)](#)



GRAPHICSFACTORY PA TOOLS AND FILTERS

GraphicsFactory implements a GraphicsFactory Process/Analyze tool (commonly called just PA tool) and a GraphicsFactory Template filter. This PA tool and filter are unique to FlipFactory servers with GraphicsFactory licenses, and each provides functionality to enable various workflows.

It is important to understand how PA tools and filters work, in order to correctly configure factories to process GraphicsFactory jobs.

FlipFactory's PA tools operate at the factory level. That is, they operate on input, not output, and are enabled in a factory at the top level. PA tools do not operate at the product level, as product filters do.

Product filters, on the other hand, operate on output, not input, and are added at the product level in a factory: each factory can have multiple products. Therefore, for each product you add to a factory, you can add a product filter and configure it to meet your needs.



Note

In addition to specific PA tools and filters created especially for GraphicsFactory, you can utilize any other PA tools and filters you need to create your media.

GraphicsFactory PA Tool

The GraphicsFactory PA tool permits you to submit GraphicsFactory jobs with the FlipFactory Job Submit window or by adding media files to folders or shares being tracked by FlipFactory monitors.

Use the GraphicsFactory PA tool only when you have variables in the template and you're creating a two-stage workflow (by creating a Duplicate Original product). This enables an operator to view the job, input values for each variable, and resubmit the job for final output.

Alternatively, this workflow allows the automatic population of special variables such as \$DURATION and \$FILENAME.

In a two-stage factory, the stage one factory processes manually submitted jobs or jobs that have been generated by a monitor. The stage one factory is configured with a Duplicate Original product (for Resubmit/Forward operation and to provide the same input media to stage two) and to display variables from the template in the Resubmit/Forward window. The operator supplies values for each variable, and resubmits the job to the stage two factory for product encoding.

If there are timecode variables or automatic variables, you should also create a QuickTime Proxy product in the stage one factory. This triggers



the population of variables, and also allows an operator to view the proxy and easily select points in the movie as timecode values using the slider.

The GraphicsFactory PA tool should be enabled in a factory when:

- You're submitting jobs via monitors or Manual Submit window and...
- The template has variables and specific values must be calculated and entered by an operator (or filled in manually) during job processing, then forwarded to another factory for media transcoding and final output and...
- Your workflow has two factories: a stage-one factory for processing the template and "filling in the blanks" either by an operator or automatically, before submitting to the stage-two factory for producing the overlay media using the template with image, audio, and movie files, variable values, and baseline video.



Note

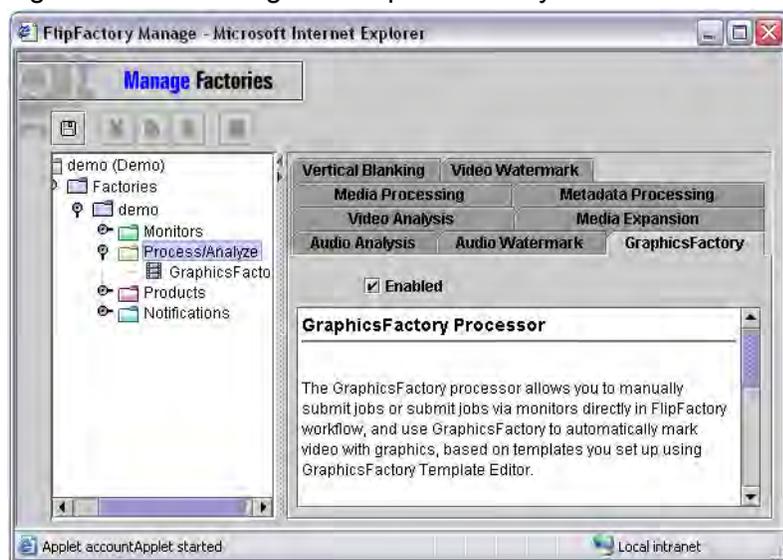
If you are submitting jobs without variables, or you are submitting jobs using the GraphicsFactory Submit tool, you should enable the GraphicsFactory filter directly in the product: you do not need to use the GraphicsFactory PA tool.

Enabling the GraphicsFactory Process/Analyze Tool

Step 1

Open the factory you're working on.

Figure 4–1. Enabling the GraphicsFactory PA tool

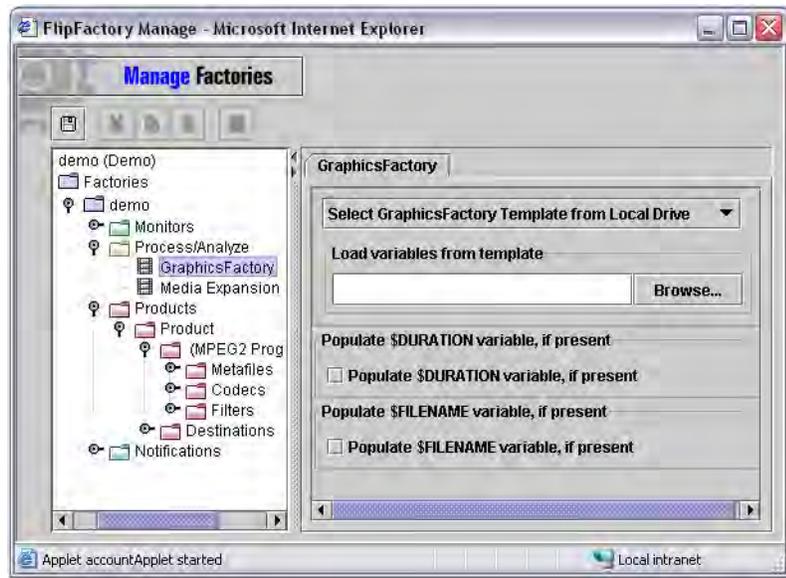


- Step 2** Click the Process/Analyze icon to display the list of tools.
- Step 3** Click the GraphicsFactory tab, and check Enabled.

Configuring the GraphicsFactory PA Tool

To configure the GraphicsFactory PA tool, Click the Process/Analyze > GraphicsFactory icon to display the editor and follow these steps:

Figure 4–2. Configuring the GraphicsFactory PA tool



- Step 1** If your template is on the same computer as the GraphicsFactory server, select Select GraphicsFactory Template from Local Drive. If it is on a network server, select GraphicsFactory Template from Network Drive in the dropdown at the top of the editor panel and then enter the domain or workgroup you're in, in the Domain/Workgroup Name field.
- Step 2** Next, click Browse to locate and select the GraphicsFactory template that you want to use for jobs submitted to this factory.
- Step 3** Optionally, check Populate \$DURATION Variable. Check this option when you are using \$DURATION in the template to provide GraphicsFactory the length of the video, so you can apply effects based on the total length of the output.

For example, you may want to apply a fade-out for 4 seconds prior to the end of the clip. Check this option to pass the value in the template through with the job ticket without requiring operator data entry.



Note

Using the \$DURATION variable requires that your stage one factory produce a QuickTime product as a proxy, or uses the Analysis encoder. If you use a Quicktime proxy, a small one using the MPEG4 encoder (60 x 80, for example) is acceptable. Using the Analysis product or the Quicktime proxy enables correct frame-accurate calculations of the baseline duration.

Step 4

Optionally, check Populate \$FILENAME Variable. Check this option when you want to use the \$FILENAME variable (which is the base filename of the input media without path or suffix text), as part of a text or image overlay. Check this option to pass the value in the template through with the job ticket without requiring operator data entry.

For example, you are using `C:\inputmedia\sierrasunset.mpg` as input media. \$FILENAME is set to `sierrasunset`. You can use \$FILENAME in a text overlay. You can also use it as the filename for an image overlay, by prepending it; modify the GraphicsFactory template to add a directory and extension. For example, place `"C:\inputmedia\images\"` + \$FILENAME + `".tif"` as the filename for the image.

Step 5

Whenever you make changes to a factory, be sure to save it so that changes in the configuration are applied to the next job submitted.

Media Expansion PA Tool

The Media Expansion PA tool is a FlipFactory PA tool which allows you to add black frames to the beginning or end of your baseline video, or in the middle, as a segment. You can use this additional black baseline video to add introductory graphics, QuickTime movies, an audio bed throughout your video.

When adding black video to expand your baseline video, be sure to compensate for the new values when designing your template.

The Media Expansion pa tool should be enabled in a factory when you want to add black time as a leader, trailer, or internal segment to increase the overall length of your media.



Note

You can add a bumper, trailer, and one intermediate segment to your video using the Media Expansion PA tool's editor panel. If you need to add multiple intermediate segments, use the FlipFactory SDK. Contact Telestream for details.

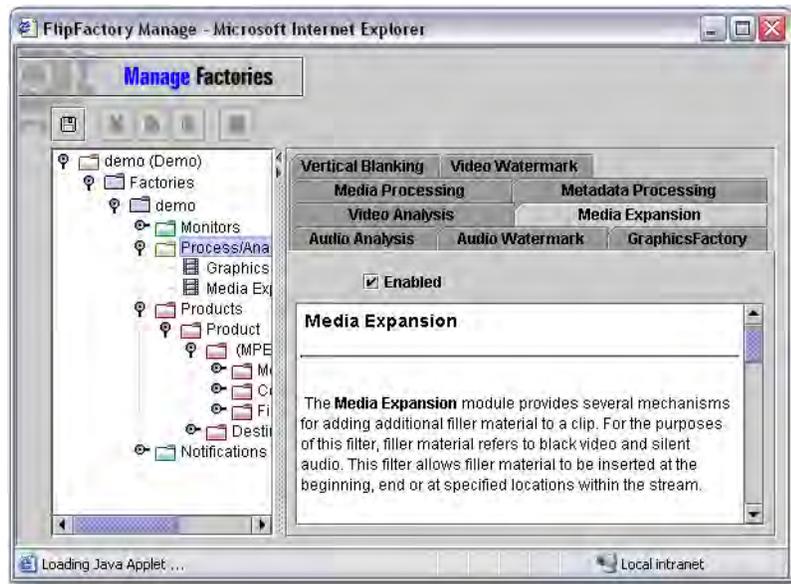


Enabling the Media Expansion PA Tool

To enable the Media Expansion PA tool, log into the account using the FlipFactory console, follow these steps:

Step 1 Open the factory you're working on.

Figure 4–3. Enabling the Media Expansion PA tool



Step 2 Click the Process/Analyze icon to display the list of tools.

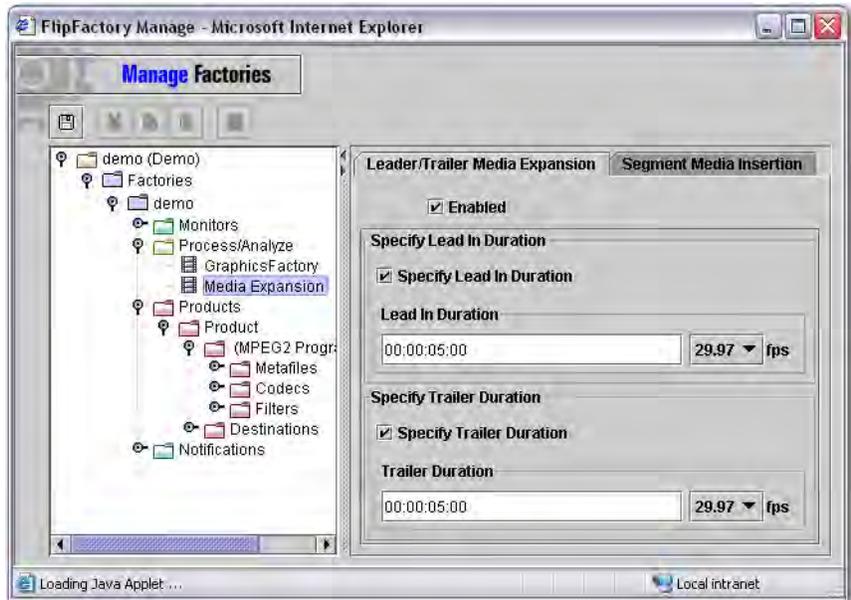
Step 3 Click the Media Expansion tab, and check Enabled.

Configuring the Media Expansion PA Tool

To configure the Media Expansion PA tool, Click the Process/Analyze > Media Expansion icon to display the editor and follow these steps:

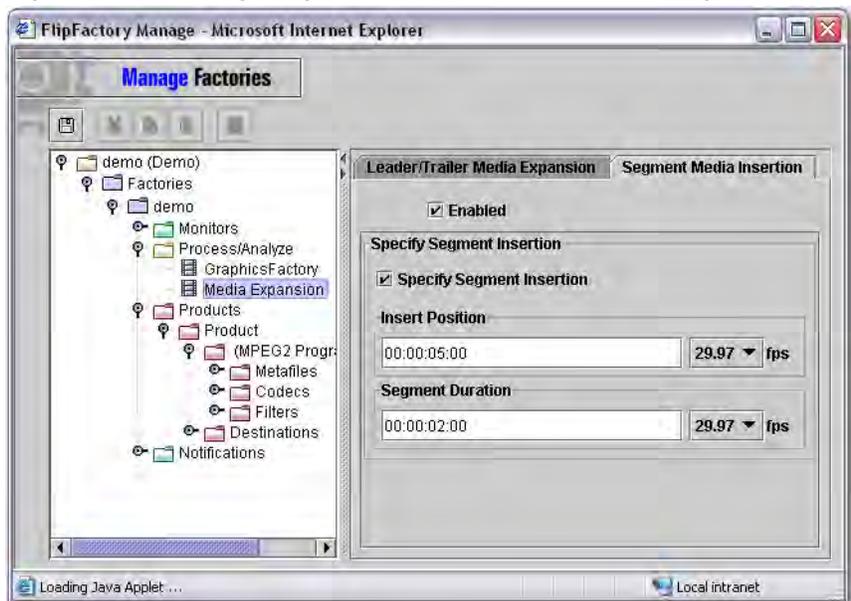


Figure 4–4. Configuring Media Expansion to add leader/trailer



- Step 1** On the Leader/Trailer Media Expansion tab, check Enabled, and then check Lead in Duration and/or Trailer Duration and specify the amount of time in timecode format that you want to add to your baseline video before applying elements from your template.

Figure 4–5. Configuring Media Expansion to add a segment



- Step 2** On the Segment Media Expansion tab, check Enabled, and then check Segment Insertion and specify the position in the original input media where you want to add a black segment, and enter the amount of time in



timecode format that you want to add to your baseline video before applying elements from your template.

Be sure to select the correct fps value to match your baseline video.

The position value should be calculated from the original baseline video, not taking into account any leader black time you've added.

Step 3 Whenever you make changes to a factory, be sure to save it so that changes in the configuration are applied to the next job submitted.

GraphicsFactory Template Filter

Product filters (often called just *filters*) are always applied directly to output media: a *product* in FlipFactory terms, and you can produce one or many products in a single factory.

The purpose of the GraphicsFactory Template filter is to allow you to use different GraphicsFactory templates for each product in a factory.

The GraphicsFactory Template filter is almost always used; especially when:

- You're submitting jobs via monitors or Manual Submit window and...
- You have multiple products per factory, and each product requires a separate template or...
- You've enabled the GraphicsFactory PA tool (requires a Duplicate Original) and unchecked Attach specified template in the stage one factory.

In this case, the product filter should be enabled and the template selected in each product in the stage one (product encoding) factory. The one case when you don't need the GraphicsFactory Template filter is when you are submitting a file through the GraphicsFactory submit tool.

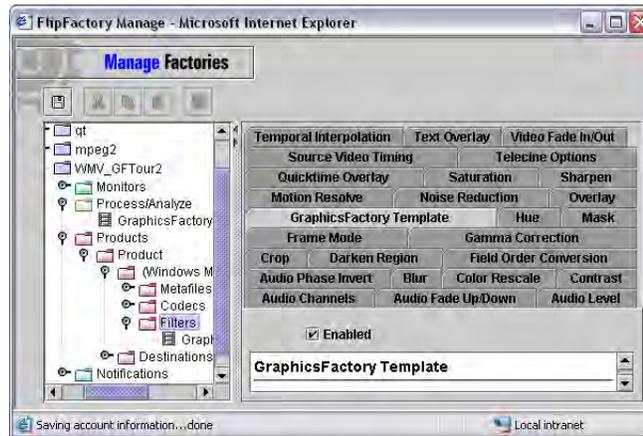
Enabling the GraphicsFactory Template Filter

To enable the GraphicsFactory Template filter, when logged into an account in the FlipFactory console, follow these steps:

Step 1 Open the factory you're working on.



Figure 4–6. Enabling the GraphicsFactory Template Filter

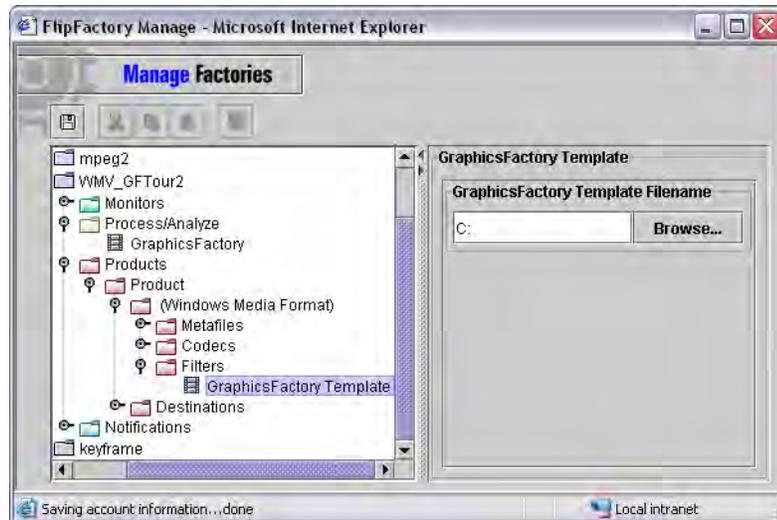


- Step 2** Open the product that you want to specify a specific template for.
- Step 3** Open the format icon, then click the Filters icon to display the list of tools.
- Step 4** Click the GraphicsFactory Template tab, and check Enabled.

Configuring the GraphicsFactory Template Filter

To configure the GraphicsFactory Template filter, Click the Filters > GraphicsFactory Template icon to display the editor; follow these steps:

Figure 4–7. Configuring the GraphicsFactory Template Filter



Click Browse to locate and select the GraphicsFactory template that you want to use for this product.



GRAPHICSFACTORY SUBMIT TOOL JOB SUBMISSION WORKFLOW

In this workflow, GraphicsFactory jobs are submitted using only the GraphicsFactory Submit tool. Templates may or may not have variables.

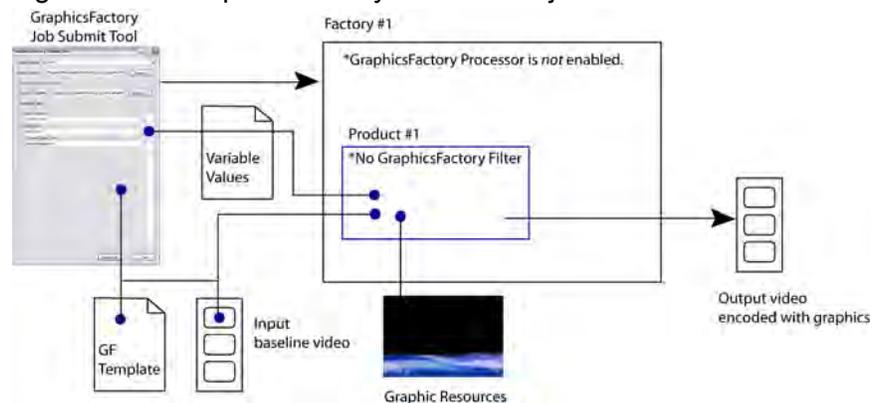


Note

The GraphicsFactory Submit tool is different from the FlipFactory Submit Job window, which also allows you to submit jobs manually. See “FlipFactory Monitor/Manual Submission Workflow” on page 4–12 to learn how to set up factories and use the FlipFactory Job Submit window to submit GraphicsFactory jobs.

This simple workflow is designed for testing, and for low-volume, manual job submission. This method is *not* recommended for high-volume workflows.

Figure 4–8. GraphicsFactory Submit tool job submission workflow



Factory Configuration

The factory which processes the job may have one or more products, and the factory should not have the GraphicsFactory PA tool enabled. It is not needed because the GraphicsFactory Submit tool displays the variables (if present) for the operator to add values before submitting the job.

Additionally, there is no GraphicsFactory Template filter enabled on any of the products in this factory, because the template is selected by you, and passed in by the GraphicsFactory Submit tool. Thus, this factory has no special configuration that is different from any other factory.

Make sure that the frame size on each product you produce in this factory matches the appropriate frame size for the template that you're using.



Job Submission

For this workflow, you submit a job by running the GraphicsFactory Submit tool. Connect to the target GraphicsFactory server, and log in to the account that owns the factory you want to submit a job to.

Figure 4–9. GraphicsFactory Submit tool job submission workflow



In the main window, select the factory name from the drop-down menu. Next, Select the video source, and the template. If there are variables to supply values for, enter them now. Finally, click Submit Job.



FLIPFACTORY MONITOR/MANUAL SUBMISSION WORKFLOW

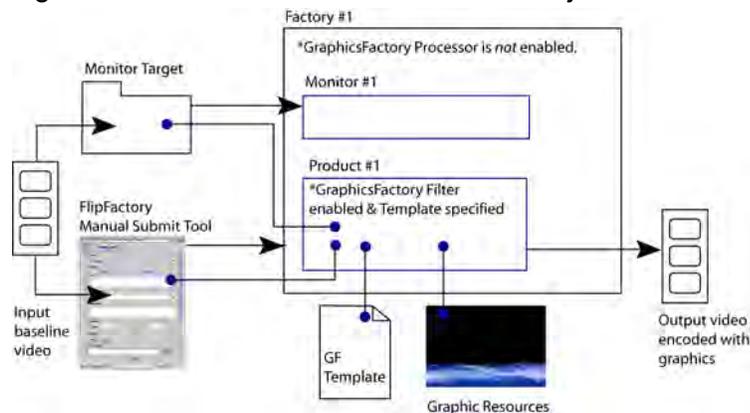
In this workflow, GraphicsFactory jobs are submitted via FlipFactory monitors, or manually using the Manual Submit window in FlipFactory.

Templates may or may not have variables. If the template has variables, the default values are used in this workflow – there is no data entry opportunity for operators before encoding the final video overlay media. (See “[Monitor/Manual Submission With Data Entry Workflow](#)” on page 4–14 for a workflow with manual data entry.)

This automated workflow is designed for high-volume, automatic job submission via monitors (or manual submission when necessary), when variable values (if any) are pre-set and do *not* require operator intervention or automatic calculation.

The factory which processes the job may have one or more products.

Figure 4–10. Workflow for monitor/manual jobs & no data entry



Factory Configuration

The factory in this workflow does not have the GraphicsFactory PA tool enabled, because the default values are acceptable, and you want a no-operator intervention workflow.

In this workflow, the GraphicsFactory template filter must be enabled on each product, because it is not specified during automatic submission via the monitor or manually, via the FlipFactory Job Submit window.

Therefore, each product must have the GraphicsFactory Template filter enabled, and the template must be specified.

You can use different templates for each product; for example, a small mobile video might have a different template applied than an HD product within the same factory.

Job Submission

For this workflow, you submit a job by adding your source media to the target monitor for the factory producing your media. Alternatively, submit a job manually, using the FlipFactory Job Submit window. The



GraphicsFactory filter ingests the template, and variables (if any), with default values specified, are passed in via the template specified in the filter.



MONITOR/MANUAL SUBMISSION WITH DATA ENTRY WORKFLOW

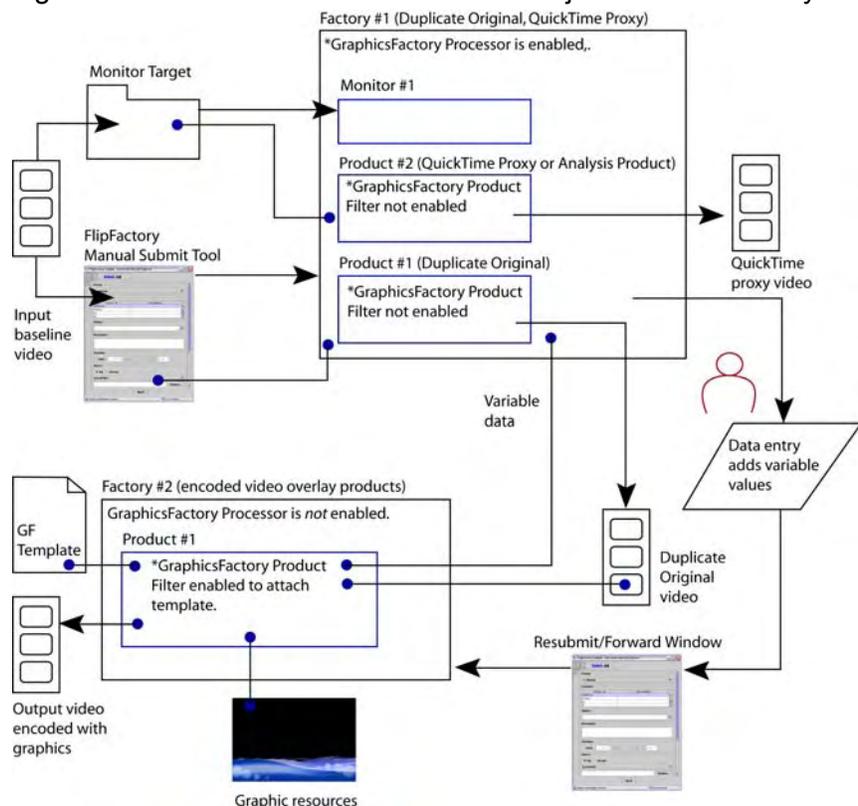
In this workflow, GraphicsFactory jobs are submitted via FlipFactory monitors or manually, using the Manual Submit window in FlipFactory.

Templates have variables, and specific values are entered by an operator or automatically calculated, before encoding the final video overlay media.

This automated workflow is designed for high-volume, automatic job submission via monitors.

The factory which processes the job has two factories, and the stage two (encoding) factory may have one or more products.

Figure 4–11. Workflow for monitor/manual jobs with data entry



Factory Configuration

There are two factories in this workflow. The stage one factory has at least one product: Duplicate Original, which is passed through to the stage two factory for product encoding.

If manual data entry is required, this workflow enables operator intervention to edit metadata (in this case, add variable values) and then Resubmit/Forward.



Additionally, if the stage one factory is used to automatically populate variables such as \$FILENAME or \$DURATION. If you're using \$DURATION, then a QuickTime product (for use as a proxy) must be added and configured. If you want to review the video with a proxy, you should create a QuickTime proxy. If it's automatic only, you only need to use the Analysis encoder. A small video using the MPEG4 encoder (at 60 x 80, for example) is acceptable, unless you have other arbitrary timecode variables which you want to supply values for by scrubbing the proxy. In this case, set the size to 320 x 480 for better viewing.

The QuickTime proxy enables correct frame-accurate calculations of the baseline duration. The optional second product in this factory is a QuickTime also enables the operator to preview the movie and identify significant times easily, if there are timecode variables in the template.

Alternatively, if all variables are automatically populated, then the stage one factory should just use a Forward Notify to pass the complete job to the stage two factory.

The stage one factory must have the GraphicsFactory PA tool enabled, the template selected, so it can be passed through to the stage two factory. If you're automatically calculating variables, such as \$DURATION, this can be configured within the GraphicsFactory PA tool. The stage two factory should have the GraphicsFactory Template filter specified in its product. This filter picks up the variables provided by the PA tool in Stage 1, and uses them when applying graphics.

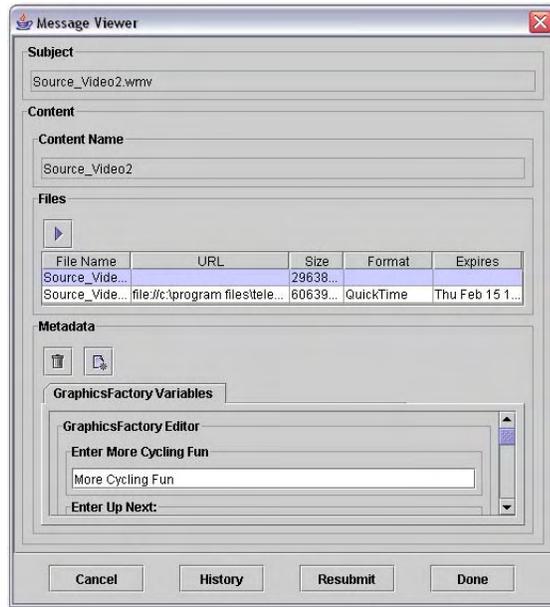
Job Submission

For this workflow, you submit a job to the stage one factory by adding your source media to the target monitor for the factory producing your media. Alternatively, submit a job manually, using the FlipFactory Job Submit window. The GraphicsFactory PA tool ingests the template, and variables are passed in.

When the stage one factory job completes, either a proxy is produced or the file is analyzed automatically, and the original file is duplicated. Display the Job Status window, and double-clicks the job to view the Message Viewer.



Figure 4–12. Use Message Viewer to view job results



Click Resubmit to display the Resubmit/Forward window.

Figure 4–13. Use Resubmit/Forward to update variable values

Destination

Account: demo (Demo)

Factory: demo

Subject: FW: Source_Video2.wmv

Notes:

Content

Content Name: Source_Video2

Files

File Name	URL	Size	Format	Expires
Source_Vide...		29638...		
Source_Vide...	file://c:\program files\tele...	60639...	QuickTime	Thu Feb 15 1...

Metadata

GraphicsFactory Variables

enter Job: 383

DURATION: 00:00:46:29 30 fps

UPNEXTSTART: 00:00:00:00 29.97 fps

GraphicsFactory Editor...

Cancel History Submit

Update the variables in the Metadata group at the bottom, including timecodes if any, using the QuickTime proxy playback editor (click GraphicsFactory Editor).



Figure 4–14. Use the Playback editor to mark timecodes and trim the header and trailer

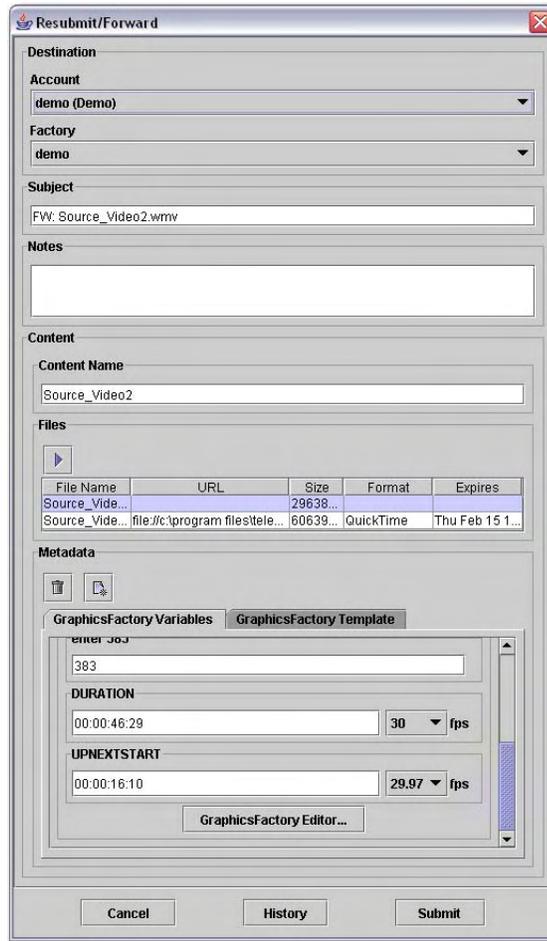


Scrub through the video and mark selected variable timecodes. Click the Save icon (disk) and close the window.

Also, you can use the buttons above the video to go to start, then scrub through leader/header or video you just don't want, and clip it. Then, you can go to end and scrub back, to trim trailer or video you don't want, all in a single step. The header/footer trim marks automatically adjust other trim marks you make.

Return to the Resubmit/Forward window:

Figure 4–15. Submit the job to the stage two factory



Note that the timecode variables you set in the playback/trim editor are updated, and update variables if you didn't already do so.

Select the stage two factory you're using to encode media, and click Submit to submit the job to the stage two factory, where the actual product encoding takes place.

WORKFLOW VARIATIONS

You can vary factory settings in several ways to accommodate your workflow requirements.

One to Many Workflow

In a one-to-many workflow, you can implement a single stage one factory with a template. After data entry, this job can be submitted to multiple templates in a stage two factory for product encoding. This is useful when you have multiple, different templates all using the same variables.



You enable the GraphicsFactory PA tool and specify a GraphicsFactory template which has the prototype variables that are common to all the GraphicsFactory templates in this group.

In the stage two factories (one for HD, one for mobile, one for SD, for example), you enable the GraphicsFactory Template Filter, and attach the specific template for this product, making sure that each template shares common variables.

**Note**

If you are submitting jobs with variables in a two-stage workflow that require multiple templates, they must have the same set of variables. You can enable the GraphicsFactory Template Filter in each product, and specify a unique template in the set.

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