

PIX:XP

MEDIA INTERCHANGE TOOL
FOR PROFILE XP MEDIA PLATFORM

User Guide



SOFTWARE VERSION 1.0

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MARCH 2003

the most watched worldwide

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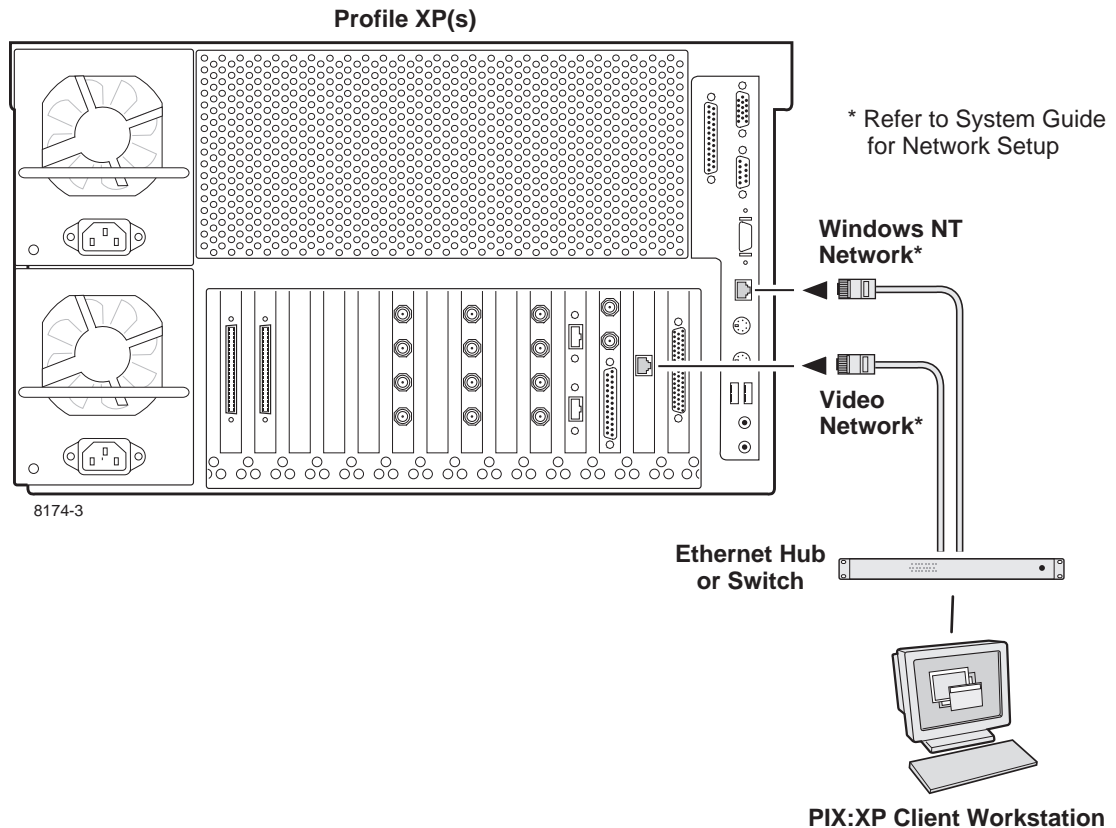
Introduction

What is PIX:XP?

PIX:XP, the Profile Image eXchange XP - Image, Audio, and Animation Interchange Tool for the Profile XP Media Platform, is a software application that allows you to re-purpose Windows media such as still images, animations, and .wav format audio to media you can use on your Profile XP Media Platform. It does this by converting the Windows media into Profile PDRM movie format and transferring it to your Profile system.

System requirements

The following illustration shows a simple PIX:XP networked environment. A single licensed PIX:XP client workstation has Ethernet connections through a switch or hub to both the Windows NT Ethernet Network card and the Ethernet Video Network card on the Profile XP system.

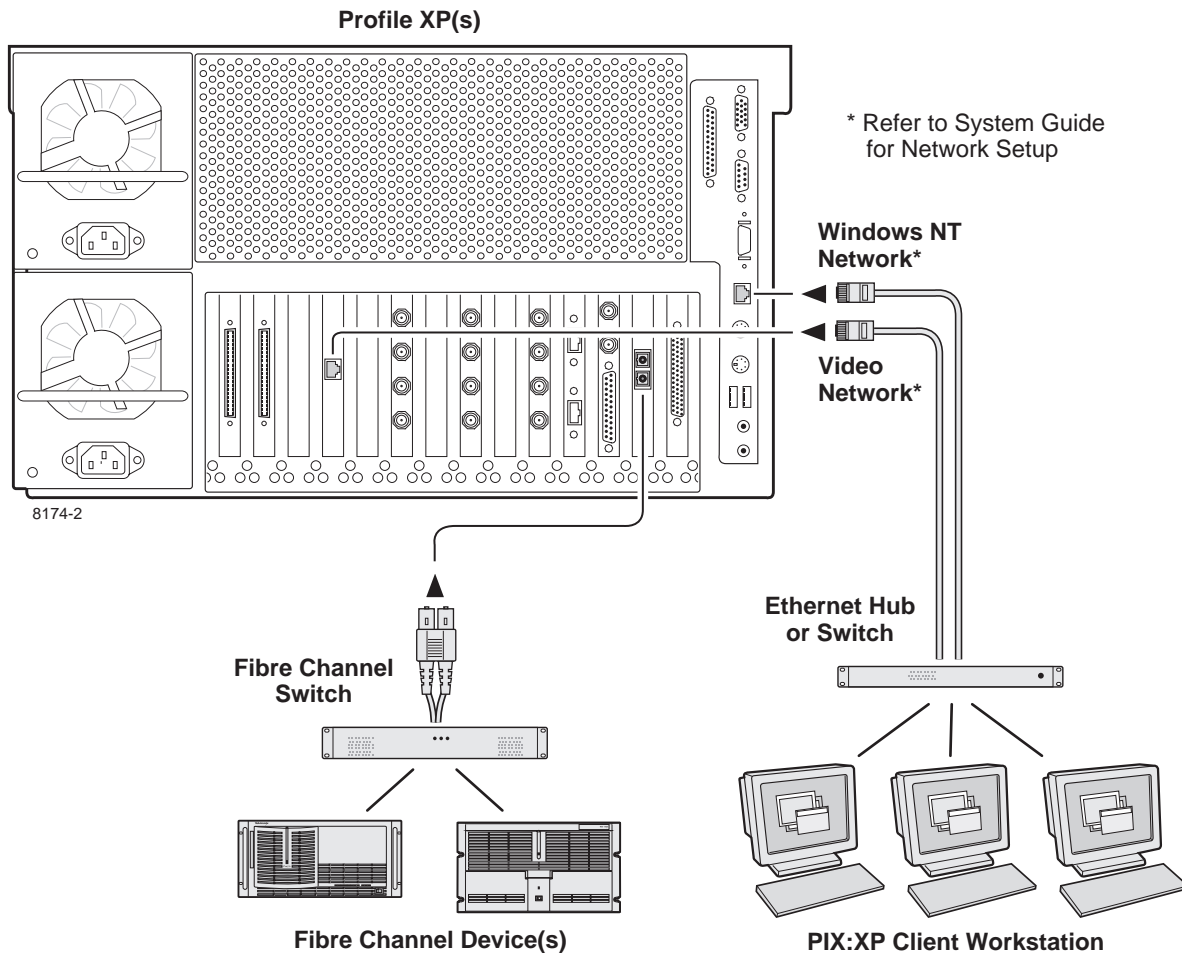




NOTE: The PIX:XP client workstation must have two network routes to the Profile system:

- **The standard Windows network.** This allows you to use the PortServer interface to a Profile XP system, which enables remote use of Profile commands.
- **The optional Ethernet Video Network on the Profile XP.** Depending on the advice of your local system administrator, you may choose to configure the Ethernet switch or hub, shown in the previous illustration, so that the two Profile XP Ethernet connections on different subnets. This may help to prevent inter-Profile media traffic from congesting the Windows network.

In the following illustration, several PIX:XP client workstations are connected to one or several Profile XP systems via the two required Ethernet connections. Once the Profile movies are created on the Profile XP system or systems, they can subsequently be moved to other Profile (PDR) or Profile XP (PVS) systems over an existing Fibre Channel Video network. The Profile movies can be played or archived just like any other standard-definition MPEG2 Profile movie.



The PIX:XP client must be installed on a client workstation which meets the following requirements:

- Processor: Pentium III or better
- Network: 100 Base T Ethernet on client, Ethernet Video Network (Option 1L) card on Profile XP system.
- OS: Windows NT 4.0 with Service Pack 6A
Windows 2000

Licensing

PIX:XP is a licensed product. You must obtain a license to use it.

If you don't have a licence, the application performs all of its functions. All images that are transferred to a Profile XP system have the Grass Valley logo embedded in the Profile movie.

The licence is stored and served from the client PC. Each PC on which the PIX:XP software is installed must be appropriately licensed.

To obtain a licence for a client PC, follow the instructions in the *PIX:XP Release Notes*. Typically, you will receive a temporary license immediately via e-mail. A permanent license will be sent to you via e-mail within five working days.

You can complete the installation of all software components and run with PIX:XP in demo mode until you receive your licence. When installing the software, be sure to follow the instructions in the *PIX:XP Release Notes*

About this manual

This document provides a tutorial that takes you through increasingly more powerful features of the application by examining work flows of increasing complexity. This is followed by a reference section which lists supported formats, etc.

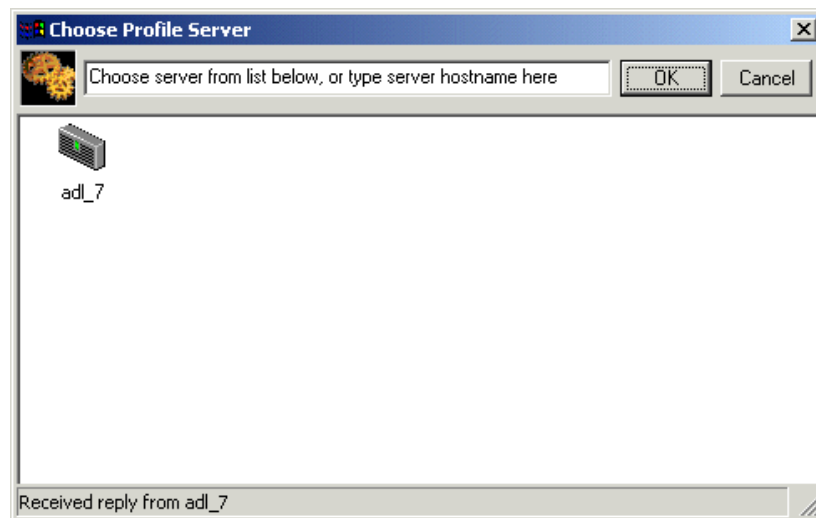
For detailed information on the product and its use, please consult the online help system.



Simple workflow example

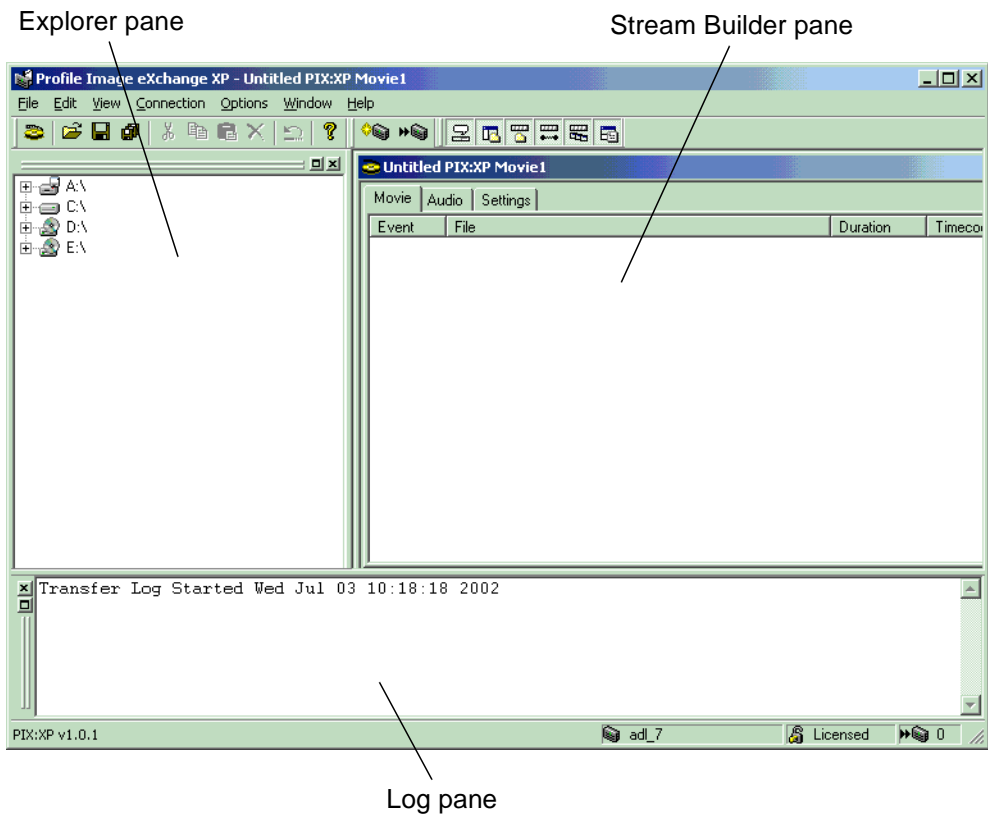
In the simplest case, you'll convert a single still image into a Profile movie that lasts one second.

First, start PIX:XP. It search for Profiles on your network and asks you to choose the one on which you wish to create your movie, as shown in the following illustration.



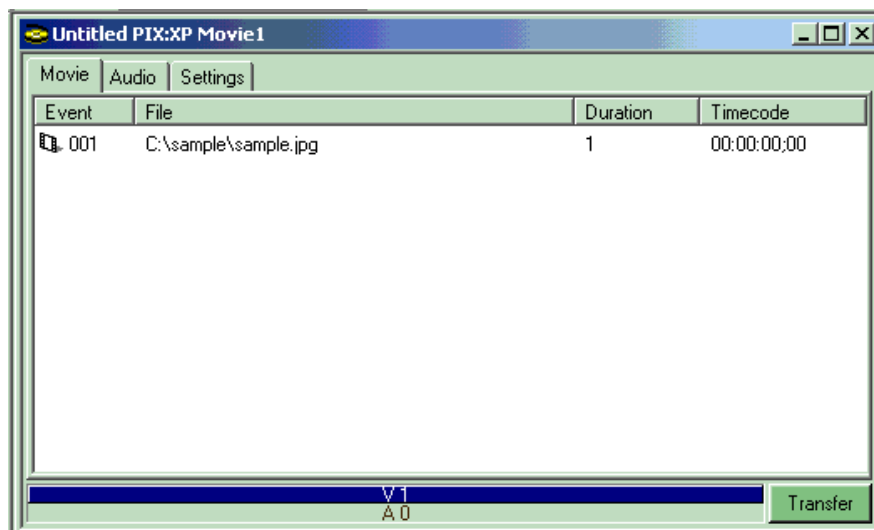
The gear wheels in the icon at the top left of the window spin while the search for Profile systems is being conducted. When they stop, all the Profiles PIX:XP has been able to find on your network will be listed in the window. In this example, there is only one Profile system on the network. Select it and click **OK**.

The main PIX:XP interface appears, similar to the following.

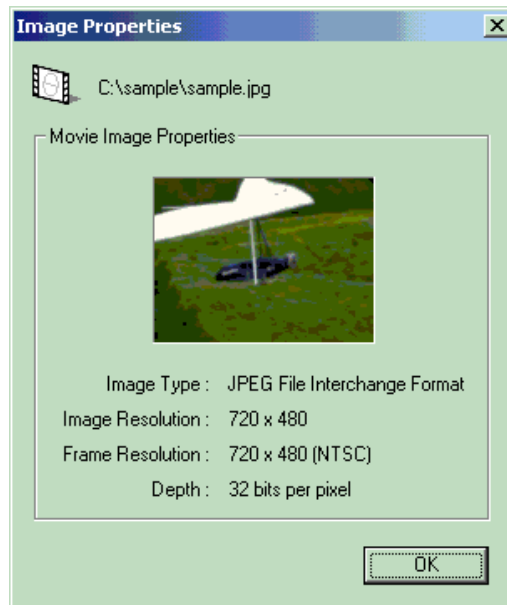


The Explorer pane allows you to access and select the Windows media you wish to re-purpose. The Stream Builder pane is where you organize your movie and adjust its settings. The Log pane displays status progress and error messages.

Use the Explorer to find a still image you'd like to convert into a movie and drag it into the Stream Builder's Movie tab as shown here.

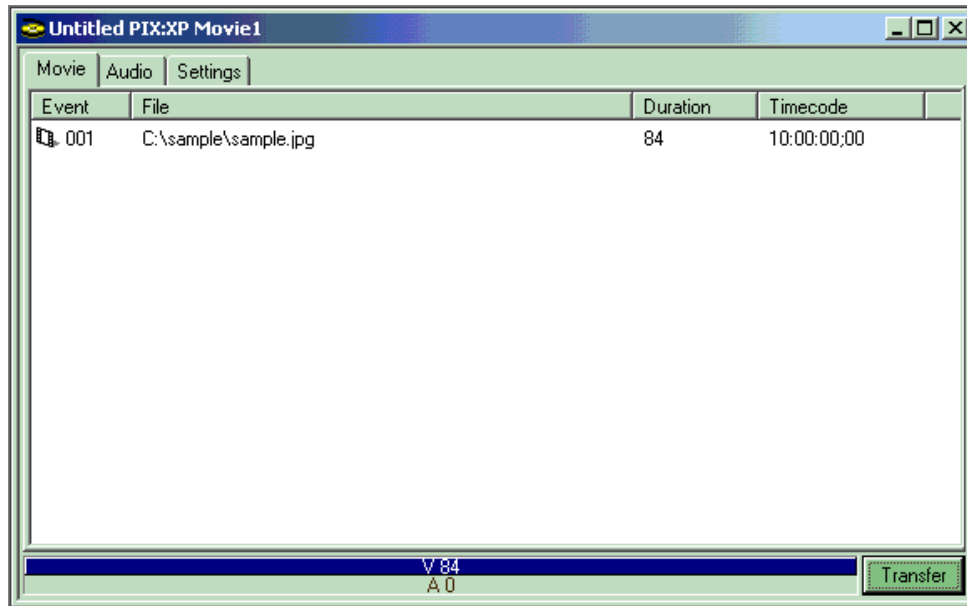


You can view the image's properties by double clicking its entry in the Stream Builder, or by choosing Properties from the context (right-click) menu. In the Properties window, shown here, you can also obtain a full-sized view of the image by clicking and holding its thumbnail. Release the left mouse button to close the full-sized view, then click **OK** to close the Properties window.

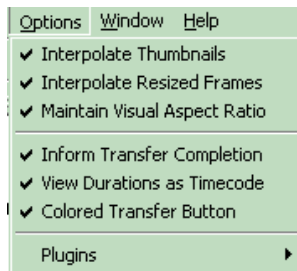


To set the duration of the Profile movie to two seconds and twenty four frames (to match the audio that we'll add later), right-click on the still in the Stream Builder pane and choose **Change Duration**. In the resulting dialog box, type in the desired duration of the Profile movie that will be created from this frame. You can either use Time-code format, in which case you'd just set it to 00:00:02:24, or a raw frame count, in which case the duration depends on the video standard you're using. In the following example, the video standard is NTSC, so the duration displayed is 84 frames.

If you'd prefer to view the duration of each still image as time-code, choose **Options | View Durations as Time-code**.



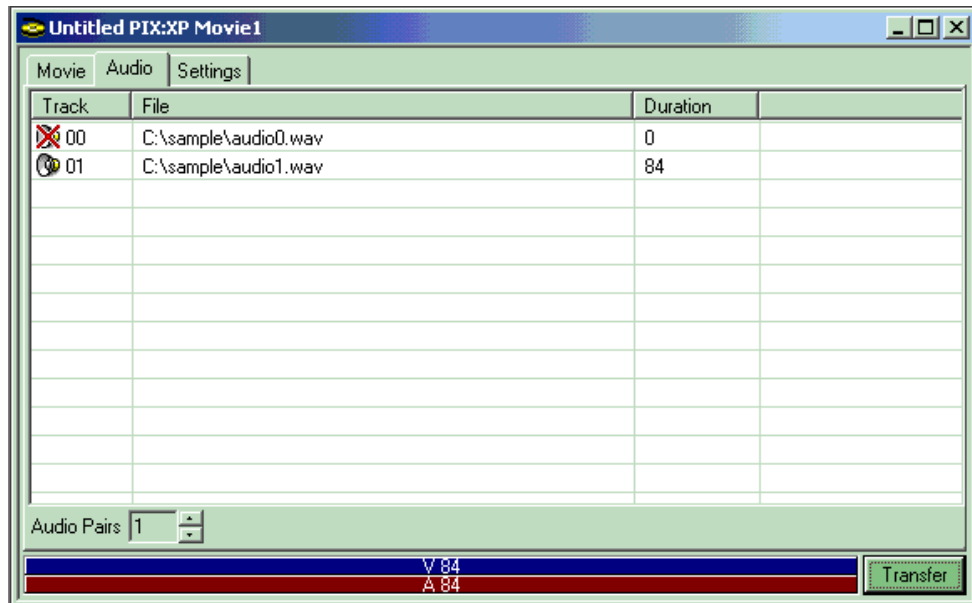
Depending on your source material, you may choose to use commands from the Options menu to obtain optimal results. For example, your graphics created on a PC may have a 640 by 480 pixel resolution that must be converted to 720 by 480 for Profile movie use. In the course of this conversion, the aspect ratio may be slightly altered. If the resulting small distortion is visible and unacceptable, choose **Options | Maintain Visual Aspect Ratio** to preserve the original appearance.



To add audio tracks to your movie, open the **Audio** tab. This will show that, by default, 4 silent tracks will be created in the Profile movie. If you want to change the number of tracks, change the “Audio Pairs” setting which allows you to set 0, 2, 4...16 audio tracks. Setting this control to zero will create a movie with no audio on your Profile system.

Drag & drop *.wav* files from the Explorer pane into the Stream Builder pane. The audio must be in the supported format: 48kHz 16bit PCM. If your audio isn't in this format, the speaker icon changes to one with a red X through it. The following figure shows what the Audio tab looks like after:

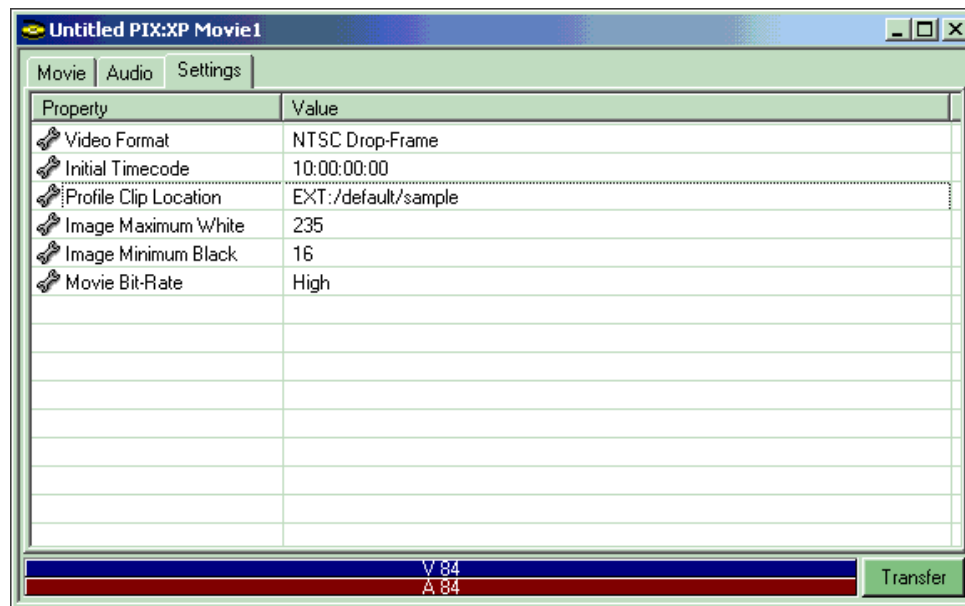
- The number of audio pairs has been reduced from 2 to 1.
- A legal audio file has been dragged and dropped into track 01.
- An illegal audio file has been inserted into track 00.



You can preview each audio track by double-clicking its entry in the audio panel and clicking the **Preview** button that appears in its Properties dialog box, shown here. If the audio is not valid, the Properties dialog box shows the incompatibility.



The final step in preparing your media is accomplished in the Settings tab, illustrated here. This tab allows you to select the starting time-code, the video format, Profile movie name and location, legal luminance values of your movie, and the Movie Bit-Rate (High = 50Mb/s, I-frame only, Low = 15Mb/s, I-frame only). In this example, the initial time-code has been changed to 10. Click **Transfer** to send your re-purposed material to Profile system.



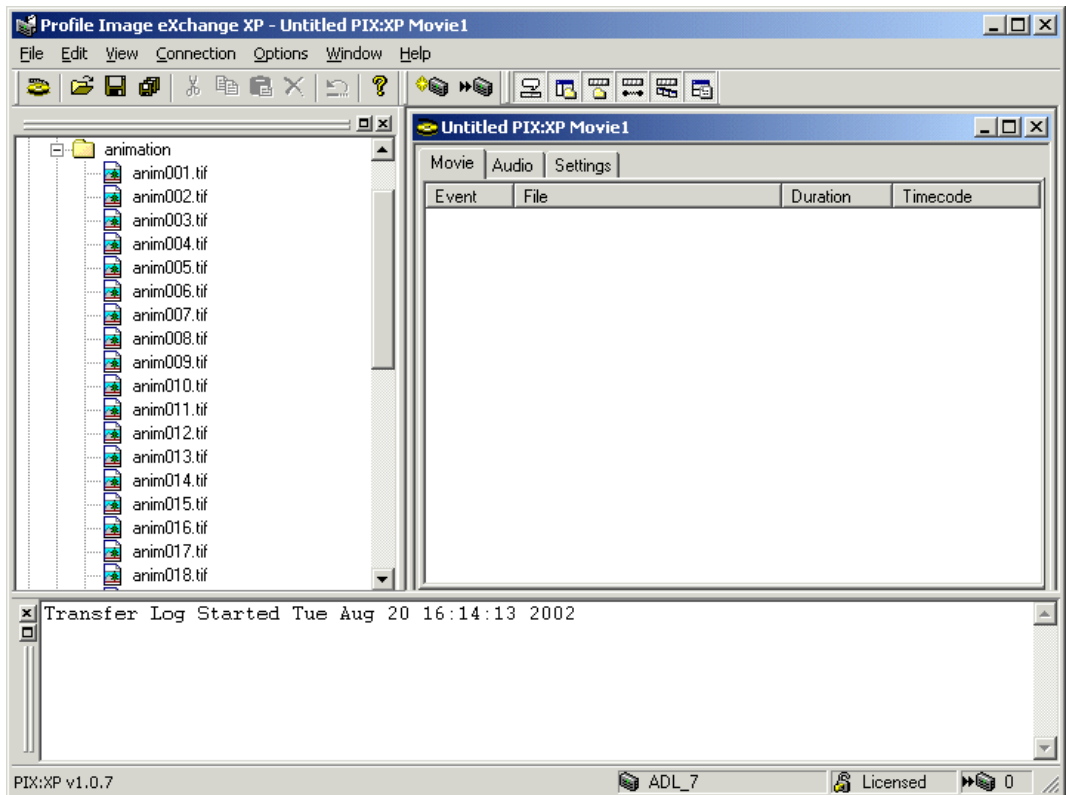
This completes the simple workflow tutorial. During it you learned how to:

- Select the target Profile system.
- Select a still image and turn it into a Profile movie with a specified duration.
- Add audio tracks to your movie and preview them.
- Set the destination movie name and video format.
- Initiate the transfer.

You can finish the tutorial by saving your stream settings as a file with the **File | Save As** command.

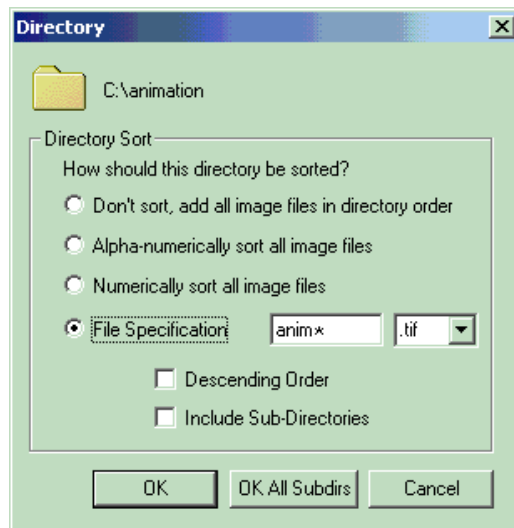
Animated sequence example

In this sample workflow, you will import a sequence of stills into the application using a variety of methods and learn how to change their order. The following illustration shows the starting point for this workflow. The stream has already been saved as “movie” and the explorer has been navigated to open a folder that contains a numbered sequence of TIF images.



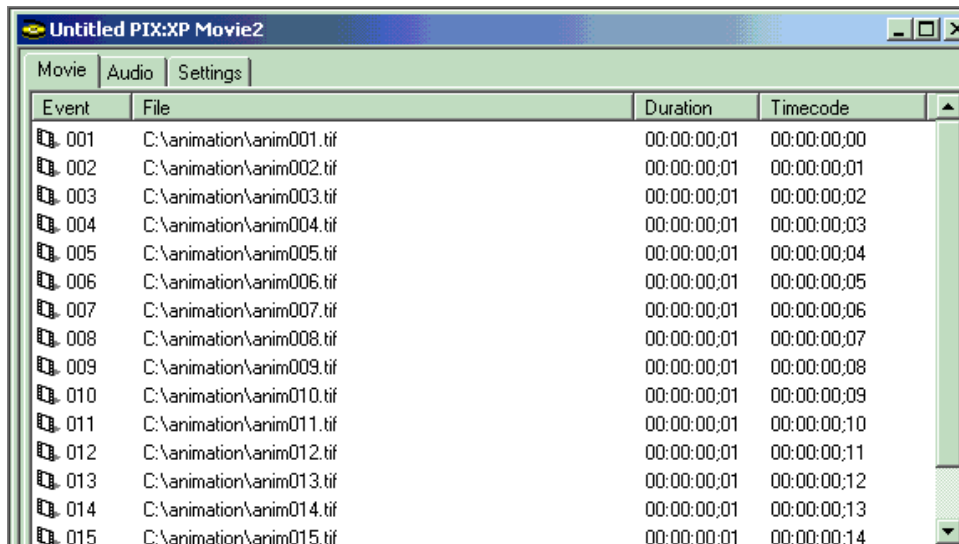
To create a Profile movie composed of the images contained in the 16 files *anim001.tif* through *anim016.tif*, all the files must be imported. The most obvious way of doing this is to select *anim001.tif* in the Explorer pane and then, with the **SHIFT** key held down, select *anim016.tif*. This will highlight all the desired files, which can then be dragged and dropped into the Stream Builder pane. You can use any conventional Windows function to select files and move them to the Stream Builder pane.

This method is fine for short sequences, but it may be inappropriate for hundreds of images. Scrolling through all the files might be tedious and error-prone, especially if the directory contains a variety of file types. Dragging the parent folder into the Stream Builder opens a dialog box that allows you to select the files you want to import, as illustrated here.



There are several ways you can import files from a folder. In this example, only *.tif* files that begin with *anim* will be imported. The filename specification is “anim*” where the “*” means “match any characters”. This means that the following filenames would be selected: *anim1.tif*, *anim01.tif*, *anim001.tif*, etc.

You can be more selective by using standard wildcards to specify the pattern. For example, *test???.tif* causes only those filenames that contain three-digit numbers to be selected. This means that the following filenames would be selected: *test001.tif*, *test002.tif*, etc.; but that these filenames would *not* be selected: *test01.tif*, *test0001.tif* because they don’t contain three-digit characters. The following figure shows the result of importing the stills by this method.



The playing order of the stills is from top to bottom of the Stream Builder window as is indicated by the Time-code column. You can change the order in which the sequence runs by selecting a still and dragging it up or down. A horizontal line indicates where the still will be moved to once the mouse button is released.

You can transfer this movie to Profile XP system using the method described in the first example.



Reference

Supported file formats

PIX:XP provides fairly comprehensive support for most popular file formats used in graphics production. It does not currently support images with alpha channels. That feature is slated for a release in the near future. The following table lists of supported file formats:

Name	Extensions	Restrictions
Tagged Image File Format	TIF, TIFF	RGB & Mono only, no Alpha
Bitmap	BMP	
Graphics Interchange Format	GIF	
Joint Photographic Experts	JPG, JPEG	
SGI	RGB, SGI	No Alpha support
TARGA	TGA	No Alpha support

Supported Profile systems

At the moment, PIX:XP is supported on PVS 1000 (the Profile XP Media Platform) and PVS 1100 Profile servers. Support for Media Area Network (MAN) Profile systems and PVS 2000 Profile systems is planned for future releases. Legacy (PDR 100, PDR 200, PDR 300, and PDR 400) Profile systems will not be supported.

At present, only MPEG2 compression is supported. Profile movies consist of I-frame only, either 15Mb/s or 50Mb/s video. Support for other MPEG 2 bitrates and DVCPRO is planned for a future release.



Supported video formats and image sizes

Standard Definition PAL and NTSC formats are currently supported, with future support planned for High Definition.

The Video Format in the Settings pane defaults to the correct setting according to the locale of the client PC.

Grass Valley recommends sizing the input still images according to following table prior to importing them to PIX:XP. This is because PIX:XP automatically re-sizes its input according to the Video Format selected. If you have chosen **Options | Interpolate Mis-sized images**, it will use a smoothing algorithm when re-sizing the images. Otherwise, it uses no interpolation. This option allows you to trade-off image quality against speed.

Video Format	Image Width	Image Height
PAL	720	576
NTSC	720	480

Supported audio formats

In version 1.0, only 48kHz 16bit mono PCM in WAV format is supported. Support for different audio formats will be extended in future releases but will probably continue to be restricted to WAV.