

15. Project Manager

15.1 Introduction

The Jaleo Project Manager is used to create, maintain, select and delete projects. A Jaleo project is a particular directory structure under the Jaleo WORK directory. There is always one project existent and selected. *For more information on Jaleo directory structure and work area configuration, please see the setup and installation manual.*

To perform its tasks, the Jaleo project manager uses a number of utility applications: it starts up the SGI filemanager for project browsing and uses its own “dustbin” application to facilitate deletion of clips and their accompanying material.

15.2 Starting the Project Manager

Start the Project Manager:

- by selecting it from the toolchest menu
- by typing `Projects` in any UNIX shell

15.3 Application Window

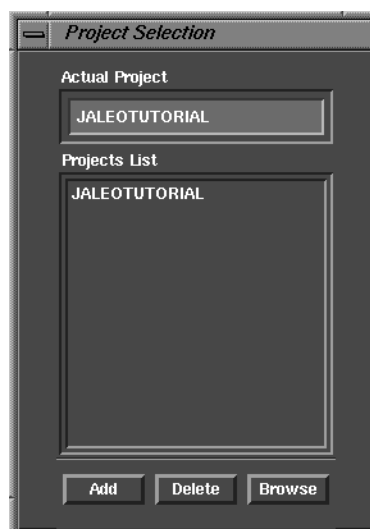


FIGURE 44. The Project Manager

The Project Manager window consists of a single text field displaying the currently activated project, a list displaying all other available projects and three buttons to create, delete or browse projects.

To select a project, just click on its name. The selected name will replace the entry in the selected project field of the window.

To create a new project, select the Create button. A little popup window will prompt you for the name of the project to be created. An empty directory structure for the new project will be created under the configured Jaleo WORK directory.

To delete the selected project, press the Delete button. This will not only delete the project but all associated material. *Be careful with that, as other projects may use material from the selected project.*

To view a projects content, press the Browse button. This will open an SGI file manager window on the project's top level directory.

16. The Input/Output Module

16.1 Introduction

As its name suggests, the IO module incorporates IO and peripheral control functions. It is not completely alone in this function, as real time IO functionality for Sirius- (Jaleo Plus only) and Cosmo Compress-equipped machines is handled in a separate IO program. Less obviously, the IO module is also used to initiate render processes. Finally, the IO module provides job control, and allows you to set up a list of conversion jobs and to execute this list in batch mode.

The IO module is quite simple in operation: You create jobs by specifying a source and a target “device” and giving the devices a few parameters that determine on which particular data to operate.

When executing the job, material is transported from the source to the target applying any necessary conversions on the way. “Device” is a very generic term in the Jaleo environment. It simply denotes any entity you can take video data from or where you can write video data to. Typical devices are DDRs or other video peripherals, but the IO also treats the various hard disk storage options on the computer side as devices: image files, raw partitions and Jaleo clip files.

16.1.1 File Devices

There are three types of file devices:

- **Disk Devices.** On a disk device, image file sequences reside in normal filing systems, accessible to any UNIX program and the normal desktop tools. Image sequences can be in a number of formats, including Targa, Tiff, SGI and many more. Typically, image sequences are a product of computer graphics application or a file transfer. A disk device is used to read in file sequences or to store video data coming from any other device. You can use disk devices for file format conversion by using one device as source to load one file format and another device as target to write to different format.
- **Raw Partitions.** These are special areas on a disk that are maintained by Jaleo exclusively, without the intervention of the UNIX file system. Raw partitions are very fast in operation (see “Raw Device Storage” on page 38 for more information), but they can only be accessed via the Jaleo IO mechanism. You can use raw partitions only as sources for IO jobs. To write to a raw device, you have to do so via the Clip file mechanism - all content on raw devices needs to be associated with a clip file.
- **Jaleo Clip Files.** A Jaleo clip file (see “Clips and Image Data” on page 37) is a description file containing information about location and format of source and preview images of the given content. The clip file is the general access point for media data in the Jaleo Environment. When using a clip file as a source, only the corresponding source images will be used. When writing to a clip file device, however, the system will create a new clip file, convert the source material

to the desired storage format and create preview images in any of a number of preview formats. Creating a clip file always involves a physical copy, often with a format conversion, of the source material.

When clip files are created, the current project settings from the project manager are important. The clip file is always written to the CLIPIMAGES directory of the current project, while the source and preview data is either written to a corresponding directory in .IMAGESRC, or to a raw partition, depending on clip device parameters. See the installation and setup manual for more information on project structure.

16.1.2 Rendering

Rendering is handled in a very similar manner: A “Render Device” allows you to select a render file previously created in the Reel, and to pipe its output to any output device, be it a DDR, a disk or a raw device. In this case, the computer extracts the information from the source, (the render file), applies a conversion (a render process) and writes the result to the selected output devices.

16.1.3 Relations with Other Jaleo Modules

Clip files with their associated source and preview image data can also be created using real time input via the Sirius or Cosmo capture applications. There are some “physical” limitations for the material associated with clips from these sources: Due to speed requirements, Sirius real time capture of uncompressed video frames always must go to raw partitions (or rather disk arrays handled as a large logical volume) of sufficient speed. Cosmo-created movie files will always go to normal file systems.

The Jaleo project manager application can be used to create projects and to manage their content. See “Project Manager” on page 137 for more information.

As manual deletion of Jaleo clips (due to the various associated data files) using normal UNIX and desktop tools can be tedious if the data is stored on normal file systems (and impossible if stored on raw devices), Jaleo provides a special application to manage deletion of Jaleo clips. See the addendum to the User’s Manual for more information.

As raw partition storage cannot be monitored using normal UNIX tools, there is also a raw partition storage monitor application. See the addendum to the User’s Manual for more information.

16.2 Supported Devices

The IO module currently supports the following devices and pseudo devices (see the release notes that came with your Jaleo package for an updated list):

- DDRs from Accom (WSD, WSD XL), Abekas (A65/66), Sierra Design, HP
- Image Files in various formats: Targa/Vista, Tiff, SGI, Liberty, Alias, Wavefront, Softimage
- Jaleo Clip Files
- Movie Files in SGI Movie format

- Raw Partitions
- Render Files (read only)

Sirius and Cosmo support is provided by respective capture/payout applications. The Sirius IO program is only delivered with Jaleo Plus, while the Cosmo IO is part of Jaleo Composite.

For information on additional device setup options, please see the installation and setup manual.

16.3 Starting the IO Module

The IO module can be started by:

- Selecting it from the JALEO toolchest menu
- Double clicking its desktop icon
- Typing IO in a UNIX shell

16.4 Application Window

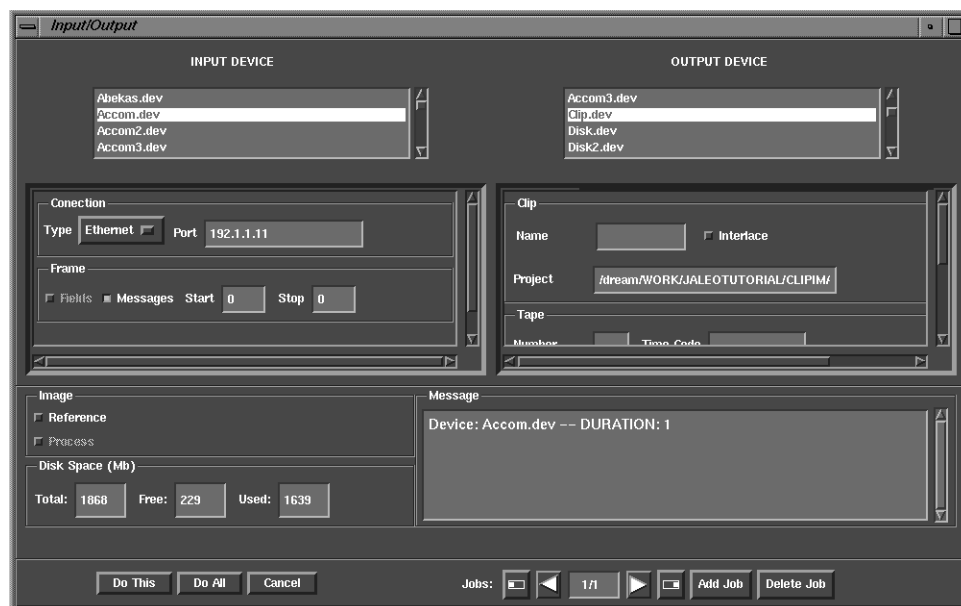


FIGURE 45. The IO Module

The IO module consists of the following sections:

- Selection for input and output device types
- Device parameter control for input and output
- Reference control and disk space monitor
- Processing log display.
- Execution/job control buttons.

16.4.1 Input/Output Device Type Selection.

Two scrollable lists display all device types available. Once you pick a device type, the corresponding parameter box will appear below the list. Before you can do a conversion, you always have to select an input and an output device (source and target).

16.4.2 Input/Output Device Control.

The configuration window (just below the device list) displays all parameters that control the selected device. Depending on the device type, you may have to scroll the parameter box to see all parameters. Device parameters will be explained in detail below.

16.4.3 Reference Control and Disk Space Monitor

The reference toggle button is used to pop up a display window to give you a visual reference of all images processed by the IO module. You can pop up or down the display window by selecting or deselecting the toggle.

A second toggle button is provided for a future image process extension; this feature is not yet available.

The disk space monitor allows you to display the available and used disk space of all disks connected to your machine either locally or via the network. To view space information for a disk, select it using the option button.

16.4.4 Message Log

In the message box, status messages on a job in progress are displayed. In case of errors, the system provides a diagnostic output to help find and resolve the problem.

16.4.5 Execution and Job Control

Using the execution control buttons, you can start conversions either in immediate or batch mode. The Job Control buttons are used to add jobs to or delete jobs from a job list. If the job list is empty, processing will be done using the current device settings. Of course, you can only execute a job once device types are selected and all required parameters are set.

Execution Control provides three functions:

- **Do This:** performs the conversion operations as determined by the currently visible parameter settings.
- **Do All:** executes the complete job list, starting with the job currently selected and proceeding until the last one.
- **Cancel:** halts the operation of the current job. If a job list is processed, batch processing is halted as well.

The job control buttons, from left to right, provide navigation through a job list and to add or delete jobs from the list.

- First job: selects first job in the list
- Arrow left: selects previous job
- Job counter: displays the number of the currently selected job, as well as the total number of jobs in the list
- Arrow right: selects next job
- Last job: selects last job
- Add job: appends a job at the end of the list
- Delete job: deletes the job currently selected from list

16.5 Devices

This section describes device parameters for the following devices:

- DDRs
- VTRAccom, a device using a VTR controlled via an Accom WSD.
- Jaleo Clip
- Disk
- Raw Partition
- Movie
- Jaleo Render
- NULL

There may be multiple entries for one type of device, as one can create different presets that subsequently will appear in the selection list. See the installation and setup manual for more information.

In case you find additional devices not mentioned here in your selection list, please refer to the release notes for a description.

Device parameters are displayed in a scrolled window below the respective device type list for input and output parameters. You may have to scroll the parameter block to access all parameters.

16.5.1 DDR Parameters

The DDR parameter selections are used for all DDR devices, currently Abekas, Accom, Quick (Sierra Quickframe) and HP.

All DDR parameter blocks display the same parameters:

- **Connection.** This is an option button to select SCSI or Ethernet connection, and a text field to enter either the SCSI or Ethernet IP address of your device. The Accom WSD supports a third interface type, called GIO. See the installation and setup manual for more information on how to setup devices.
- **Start/End Frame.** Here, you can specify the desired start and end frame for conversions from (input device) or to (output device) the DDR. If the DDR is used as an output device, only the start value can be set; the end value is determined by the length defined on the input side.
- **Interlace Flag.** Determines if the DDR will be operated in Interlace (field) mode. It is generally a good idea to capture video material in interlace mode, as otherwise jerky movements may occur. For all DDRs currently supported, this flag is greyed out, as the DDRs grab video as fields anyway.
- **Message Flag.** Determines if extended diagnostic messages will be placed in the message log window.

16.5.2 VTRAccom Parameters

The VTRAccom device uses the machine control features of the AccomWSD to capture or record video material from or to a VTR. To use this device, it is necessary to have a VTR connected to the Accom so that it is controlled by the serial interfaces of the Accom and that its inputs and/or outputs are piped into the DDR as well.

The DDR is used to control the VTR, and as a “real time buffer” for a set of frames. In record mode, some frames are copied to the DDR, then the DDR performs an Edit with the VTR, storing all the frames on the tape. This process is repeated until all the selected material is played out. In grab mode, the DDR first performs an Edit, buffering all the frames on its disk, from where they can be downloaded to the computer. This again can be repeated until all desired frames are grabbed.

- **Connection.** Just like for normal DDR mode, the connection between DDR and computer needs to be specified. Select the connection type and enter the respective SCSI or Ethernet IP address. The Accom WSD supports a third interface type, called GIO.
- **Tape I/O points.** Defines the desired start and end points, specified as timecode values. Note: These values are not corresponding to the DDR, but to the tape inserted in the VTR. The DDR is only used as a buffer. If the device is used for output, you can only specify the start point; the length of the recording is determined by the settings on the input side.
- **Buffer settings:** Define the number of frames on the DDR used for buffering. Frames from the DDR are first recorded here in real time, then copied over to the computer. In record mode, frames are first copied from the computer to the buffer area, than played out in real time.

There are two buffer values: The number of frames to be used (buffer), and a safety margin at the start of the DDR (safety). The DDR is always used from the first available frame. The safety margin is only applicable for input, where it is required due to some inaccuracies of the WSD in grab mode. Normally, the default value of 12 should give correct results; if you experience your grab’s beginning with a frame offset you can adjust this value.

16.5.3 Jaleo Clip Parameters

A Jaleo Clip device used as source will read the full resolution images associated with the clip file selected, no matter in which of the supported clip fullres formats they are stored (they could reside as image file sequence or movie file on a file system, they could be stored in a raw partition, or they could be kept on an external DDR).

When a clip device is used as a target, you have to specify some additional parameters, informing the system where and in which format the fullres and preview images need to be stored. Upon execution, the system will copy and convert the incoming images, create scaled down preview images in the selected format and finally will create an appropriate clip file (.ncip) in the CLIPIMAGES directory of the current project.

- **Clipname.** The name of an existing clip, or, in case of output, the name of the clip to be created. You do not have to write the name with extension: for the clip file hello.ncip typing hello will do.

You can use drag&drop or cut/copy/paste from the SGI filemanager or a shell to get a name to the text field. Note that if you drop a name from the filemanager, a full path name will be pasted and you will have to cut out the additional path elements. See “Drag&Drop Integration” on page 46 for more information on drag&drop.

- **Interlace-Flag.** For output use only, this flag determines if the new clip will be created containing interlaced images or not. Selecting it only makes sense if the input images are available as fields. If there are fields, however, fields always should be selected.
- **Project name.** The path to the CLIPIMAGE directory of an existing Jaleo project, by default in the current project. You can change the path name as desired, either by typing, by drag&drop or by cut/copy/paste. See “Drag&Drop Integration” on page 46 for more information on drag&drop.
- **Start and End point:** For input only, it determines the first and last frame of the clip to be used.
- **Time Code and Tape reference.** For output only. In the Jaleo clip file, the original source material timecodes and a identifier for the tape reel used can be stored. If you want to have a reference later on regarding the original location of the source material, fill out these fields.

- **File Formats.** For output only. Here, the desired output format for storage of the full resolution and preview material is selected. In the table displayed for selection, eligible entries present either a simple button or an option menu. Some entries may only be available in conjunction with certain input devices. There are two rows of buttons, one for preview files and one for full resolution images.

Image Type					
	None	Ref.	No comp.	Compress	Raw Disk
Monitor				MVC2 <input type="checkbox"/>	
Full Res.			Targa <input type="checkbox"/>	<input type="checkbox"/>	

FIGURE 46. Clip Device File Formats

The storage/format options are:

- **None:** prevents creation of either preview or fullres material for the clip. If no preview material is created, usage of the clip in the Reel might be a little bit dull, as single frame renders will have to be done for previewing.
- **Ref:** keeps the full resolution images in the input device, without copying them to the computer hard disk. This option is only selectable for the full resolution image, and only if the input device is a DDR.
- **No Comp.:** stores the images as uncompressed image file sequences on a file system. For preview images, Jaleo always uses Targa/Vista format, while for the full resolution images you can choose a number of formats from the option menu. Uncompressed image sequences are always stored in a directory with the same name as the clip to be created, placed in the .IMAGESRC directory of the current project.
- **Comp.:** stores the images as a movie file. A variety of movie file formats is available for both monitor and fullres. If JPEG compression is selected for movie files, the Cosmo compress hardware will be used if it is available. Movie files are always stored in a directory with the same name as the clip to be created, placed in the .IMAGESRC directory of the current project.
- **Raw:** stores the images in a raw partition. This is the fastest storage option available. Images stored on a raw partition cannot be managed using UNIX file commands but only by the Jaleo management tools. (see the Addendum to the User's Manual for more information)

It is highly recommended to place images and previews in raw partitions whenever possible. Even preview images can only be played back in real time directly from disk if they are stored on a raw device. All other storage locations for preview images will require the system to use memory for intermediary storage. (This applies to single files on file systems as well as to movie files.)

If you use many clips at the same time, this can use up a large amount of memory and thus provoke swapping activities on the system, in effect slowing down interactive performance dramatically. *See the installation and setup manual for more information regarding Jaleo disk configurations.*

To repeat, whenever you configure your system, try to make sure that you have raw device storage available. When you create clips, make sure that the preview images will be located on raw storage.

Note: for Jaleo PLUS, raw storage is mandatory.

Compressed image clips created with the Cosmo Compress real time capturing application always must be stored on file systems. The compressed clip materials are stored as movie files, and movie files cannot be stored on raw devices.

16.5.4 Disk Parameters

Disk devices are used to read in any image sequence stored on a disk or to write out to image sequences without creating associated clip information and preview images.

- Messages. This toggle enables extended message output to the log window.
- Format and Extension. Select a file format from the option menu. With each format, there is an associated default extension displayed in the extension field. In case your files have a different extension, you can change the value here. Always leave the dot in front of the extension.
- Lead Zeros. Expect leading zeros for the sequence numbering. If activated, Jaleo expects (or writes) numbered images with a fixed number size, padded with zeros if necessary.
- Name. The base name of the images, without the numbering.
- Path. A file system path where the images can be found or are to be written. As always, you can use drag&drop or cut/copy/paste as well as typing to enter a path. See “Drag&Drop Integration” on page 46 for more information on drag&drop.
- Start and End frame. The first and last frame number of the image sequence to be used. In case of output use of the disk device, only the start value can be specified, as the length of the sequence is determined by the input selections.

16.5.5 Raw Partition Parameters

Raw partitions can only be used for reading; to write to a raw partition, use a clip device and select image storage on the raw device. This will provide Jaleo with the “handle” to use the data on the raw partitions, that otherwise does just use up space there.

- Messages. This toggle enables extended message output to the log window.
- Name. The name of the raw partition data to be used. Current content of the raw partition can be listed using the raw partition listing tool.
- Start and End frame. The first and last frame number of the image sequence to be used.

16.5.6 Movie Parameters

The movie device is used to read in a SGI movie file stored on a disk or to write out to movie files without creating associated clip information and preview images.

- **Name.** The name of the movie file
- **Path.** A file system path where the movie file can be found or is to be written. As always, you can use drag&drop or cut/copy/paste as well as typing to enter a path. See “Drag&Drop Integration” on page 46 for more information on drag&drop.
- **Start and End frame (input only).** The first and last frame of the movie file to be used. In case of output use of the movie device, start is always at frame 0 and the length of the movie files is determined by the input selections.
- **Compression (output only).** Allows to select the compression to be used for the movie file to be written.

16.5.7 Render Parameters

The render device is used to initiate render processes. It can not be used for output, obviously. To use the render device, you have to create a render file using the render command in the Jaleo Reel first (see “The Render Tool” on page 114). The render file contains a snapshot of the reel content that will be read by the renderer to produce a result. Note: The render file does NOT contain any material, but only references to it. *You must not delete the material used in a Reel after writing a render file, as the data will be required during the render.*

- **Name.** The name of the render file
- **Path.** A file system path where the render file can be found. As always, you can use drag&drop or cut/copy/paste as well as typing to enter a path. See “Drag&Drop Integration” on page 46 for more information on drag&drop.
- **Start and End frame.** The first and last frame of the render file to be used.

All other parameters are taken from the render script created by the Render Tool in the reel window.

16.5.8 NULL Parameters

The null device is a pseudo device. If you write to it, it will simply ignore the input. The null device can, for example, be used as a target for just seeing if a read process will succeed. There are no parameters to be set.