

# Jaleo Version 2.1

## Release Notes

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*We shall be delighted to dedicate this release to the very newest member of the Jaleo family - to Leticia, also known as “Jaleita”, newborn daughter to Inma Blanquer, our director of Marketing. Best wishes from your Jaleo family.*

### 1. Introduction

Jaleo 2 is the second major release of the Jaleo digital video postproduction system. With this release, a new family member is available: Jaleo PLUS, with full multiprocessor support and real-time capabilities on machines suitably equipped.

As there are many extensions and new features since the last release, we have dedicated a full chapter of this release notes to them. The remainder of these notes contains a list of known bugs, workarounds and tricks, as well as some last minute changes.

At this place we would also like to thank all users, beta testers, and all the other people who have given us a lot of support and who have shown incredible enthusiasm. Thank you. We hope you will be happy with this release.

### 2. New Installation and License Management

Jaleo installation has changed considerably. Locations of files on disk have changed as well as the procedure to place the files on disk properly. Before you attempt to load a Jaleo 2.1 distribution media, please consult the installation and setup guide for installation information. Jaleo 2.1 can not be installed over an existing version 1.x account.

Also, Jaleo 2.1 uses a new license manager that permits network based floating licenses. All Jaleo 2.1 installations thus need new passwords, even if they are upgrading from an earlier version. The new license manager will make the licensing procedure much easier and more flexible than before. Again, see the installation and setup manual for further information.

#### **WARNING to 2.0x Users**

Installation and Licensing is different even to the 2.0x versions that basically used the old installation and licensing scheme. You can not install version 2.1 over an existing 2.0x account.

## 3. News

Jaleo Composite 2.1 has significantly improved since the release of Jaleo Composite 1.8. Changes and additions have been made in the following areas:

- User Interface. Using Jaleo 2.0 is much faster and more efficient than before because the user interface has been improved and adapted to adhere to more operation standards. New internal and external tools, including a realtime compressed video capturing application, have been added.
- Editing: Jaleo now includes a full suite of editing tools, permitting trimming, shifting, extending and many other edit functions.
- Effects: Among other things, 3D DVE with displacement mapping and an appropriate interactive editor has been added. Keying functionality has been improved.
- Jaleo PLUS supports realtime video and highly efficient parallel processing. It is intended for ONYX workstations.
- New recommended configuration using raw partitions.
- Jaleo RotoPaint. As an option, Jaleo RotoPaint is now available for both Jaleo Composite and Jaleo Plus systems. RotoPaint is an all-new rotoscoping application that supports vector based paint.
- Jaleo 2.1 is delivered with an all-new documentation that has been re-written from scratch.

### 3.1 Compatibility

Jaleo Version 2.1 is upwards compatible with Jaleo 1.8. You can read in all files from the 1.8 release, but files saved from Jaleo 2.1 can not be read with previous versions.

### 3.2 User Interface

The new Jaleo user interface maintains all the strength of the old interface, but it improves significantly on Jaleo 1.8. The most obvious changes are the absence of the Edit window and the new message line and the numeric entry area. Some of the more important new features are listed below, although many details will be perfectly obvious to you when you start using the new version.

#### 3.2.1 Multiple Account Operation

Jaleo can now be operated easily in multiple accounts. See the installation and setup guide for more information.

#### 3.2.2 Window Decorations

The default window decorations used in Jaleo accounts are now of reduced size to use up less screen real estate space.

### **3.2.3 Unified Reel/Edit Window and Menu Bar**

The edit window does not exist any more as a separate entity. All its functions, and many more, are now integrated in the Reel menu bar and in simple mouse functions. The menu bar has been reorganized to adhere to established ordering schemes. All file operations are now located in the File menu, Edit, Select and Clip contain a large superset to the functions that had been in the Edit window before. The Setup and Tools menus have been expanded to accommodate the new available options, and names in the effects menus (Mix, Key, DVE and FX) have been cleaned up.

Many menus can now be “teared off” and be used as floating tool windows.

### **3.2.4 Timecode Ruler**

The Reel window now displays timecode values.

### **3.2.5 Drag&Drop**

All file load operations and all communication between Jaleo applications can now be performed via drag&drop. All Jaleo files can be dropped directly from the Jaleo desktop to Jaleo applications. Separate file selector boxes are not required any more, but they are still available. Also, a specialized Loader application has been provided to give fast and easy access to the content of the Jaleo project structure.

### **3.2.6 Keyboard Shortcuts**

Practically all functions of Jaleo now have keyboard shortcuts. A list of keyboard shortcuts is provided with the Jaleo distribution.

### **3.2.7 Undo/Redo**

The Reel now provides unlimited Undo and Redo. You can move back as many steps as you wish. Time Editor events are also affected.

### **3.2.8 Pick Position**

The last pick position in the reel is now always marked by a special mark cursor. This Reel Cursor can be used as a reference position for many editing and selection operations.

### **3.2.9 Multiselections and Movement**

Jaleo 2.1 permits multiple selections of clips in the Reel. Almost all edit functions can be applied to multiple selections as well as to single selections.

- Rubberband-multiselection does not cause automatic grouping any more. Instead, all the clips are selected.
- Multiselection can also be achieved by holding the shift button while clicking on various clips.

Movement by mouse dragging can be applied to multiple selections.

### **3.2.10 Drag&Drop Copies of Selections**

You can now copy any selection in the reel by means of a simple drag&drop operation accomplished by using the middle mouse button.

### **3.2.11 Mouse Trimming**

Clip stretching/squeezing, actually equivalent to a trimming operation, using the mouse has been greatly improved. When you now exceed the available source range, frame numbers are printed in red. Also, frame numbers now keep their position relative to the reel. Multiple selections can be trimmed at once. More information on trimming can be found in the new Users Manual.

### **3.2.12 Time Editor**

The time editor has been rewritten completely. Not only does it now provide proper curve editing, including tangent control, multiple point selection and cut, copy, paste editing, but it does also include specialized editors for 3D animation of images and for color adjustments.

The horizontal size of the time curve display is now independent of the length of an effect.

Parameter lists may now be hierarchic, greatly easing overview of large parameter lists as for example used in the 3D DVE effect.

Undo/Redo is also available.

The time editor does not have a change mode command any more - as the 3D DVE effect can do all effects of the old 2D effects with roughly the same speed, but much more flexibility and quicker editing, there is no real need for it any more.

### **3.2.13 Process Flow Monitor**

The Process Flow Monitor is a visual display aid to help you to understand the structure of a complex multilayer setup. It gives you the equivalent of a processing tree, making it clear which process is piped into which other process. It is an indispensable tool to understand other peoples layouts and to “debug” your own.

### **3.2.14 Attributes Window**

To keep you informed on the status of clips and effects, the new overview window has been introduced. It is used to display status information on the currently selected clip.

### **3.2.15 Shuttle Window and Play Marks**

For shuttle playback, now a left and right mark can be set to limit playback to a particular area. In this area, single playback, swing and loop mode can be set.

The shuttle window can now either be used as a separate window, or it can be placed on the left side of the message line of the reel, thus saving screen real estate space.

### **3.2.16 Group Navigation**

Group clips now support comfortable group navigation. Group navigation allows you to edit group content without any interference with and of the other content of the reel window. Group navigation allows you to navigate through any number of nested groups.

### **3.2.17 Overview Window**

To maintain quick navigation and overview of complex reel arrangements, the overview window has been created. It always shows you a complete “birds eye” view of your arrangement and allows you to position the reel window quickly to any section of the composition. It is also used for group navigation support.

### **3.2.18 Position Window**

Used to permanently show positions of marks in the reel.

### **3.2.19 Gallery**

The Gallery window is a new tool that allows you to load any number of clips and to view them as flipbooks. The Gallery is a visual browsing tool through you projects content.

### **3.2.20 New Flipbook**

Jaleo 2.1 does include a new Flipbook application, with some new features. Most important, a frame rate can now be selected for Flipbook playback.

### **3.2.21 New Realtime IO application for Cosmo Compress**

With the new capture and playout application for the Cosmo Compress board you can remote control a VTR and create and process playlists for automated sequence capture and playout.

### **3.2.22 Extended Project Manager**

The project manager now allows to browse projects using the SGI filemanager tools.

### **3.2.23 Backup and Restore**

Applications for backup and restore of Jaleo projects are now provided.

### **3.2.24 Dustbin**

A clip deletion application, giving you a material reference list to prevent deletion of image material that is used elsewhere, has been added.

## **3.3 Editing**

Jaleo 2.1 has a set of complete new edit functions.

As edit in all cases requires a selection (somehow the reel must be informed what it is you want to edit), the capabilities to quickly select parts of a production have been improved. With the intro-

duction of the Reel Cursor (see above), there is always a reference position for selection. The Reel Cursor follows your reel activities, being always located at the last reel pick position. Using the functions in the select menu, you can now select everything that is right, left, above or below the reel cursor. You can also invert a selection, or select a complete layer.

Editing functions included in the new Jaleo version are:

- Splitting
- Joining
- Shifting
- Trimming
- Packing
- Alignments
- Extensions

Many of these functions can be executed comfortably using the mouse, and all of them can be executed via keyboard. Additionally, all positioning commands can be done via keyboard inputs. Wherever you choose to use the menu functions, editing arguments can quickly be typed in the reel without requiring to open up dialogue windows. Operation is thus very fast and comfortable.

Also new are the Edit In and Out marks that can be positioned in the reel as desired and that are used to optionally drive some of the editing options.

## **3.4 Effects**

Jaleos collection of effects has been extended and cleaned up for the release 2.1. The most spectacular new effect is the 3D DVE, but there are also other extensions.

### **3.4.1 Key Menu**

Some effects have been renamed for more clarity:

- Boost Blue/Green now is called more correctly Suppress Blue/Green
- The Matte Green/Blue Key now is called, more accurately, Colour Difference Key
- The Blur Key function now is called Foreground Blur to more accurately describe its function. However, a new function Blur Key has been added that does what one would expect intuitively from a function with that name: Blur the key channel only.

New effects, or changes to parameters:

- Composite / Composite Shadow: Composite has a new Mix parameter to fade in foreground objects. Composite Shadow is a version of Composite that projects a shadow from the foreground mask onto the background.
- External Matte. This effect is used to combine an image track with another image track, using the second input as a matte channel for the first one. Until now, one has used Key Color for this purpose, but this was a bit intransparent. For convenience, External Matte is provided as a

shortcut.

External Matte is nothing more but a simplified alias for the Key Color function that has been stripped of almost all parameters, only leaving the inversion parameter.

In case you do not need the additional parameters of Key Colour, External Key is preferable because it computes more rapidly.

- Luminance Band Key creates a luminance key that can be controlled independently in three luminance bands, e.g. dark, medium, bright. This can for example be used for color correction to luminance bands, for example to correct only dark tones. Remember that most of the effects in the FX menu are only applied to masked areas.
- Colour Difference Key has lost its last two parameters that went to a separate effect, Background Build, where they are far easier to consume.
- Fast Key now allows to do difference keys if used with two inputs
- Size Key applies a shrink or grow to the mask channel
- Clear Key clears the alpha channel
- Foreground Blur does what before the Blur Key did - Blur a masked object without contaminating the foreground object with the background color
- Blur key is a version of the Blur effect from the FX menu that does only blur the alpha. Normally, this effect is not needed, as all effects that require a matter blur have their own blurs.
- Edge Build is a new utility to remove edge artifacts from keys
- Background Build is a utility that is used to reconstruct clean background shots from colour difference keys when no such shot is available

### 3.4.2 DVE

- The new 3D DVE effect allows to move any number of image inputs in 3D space. To edit animations, a 3D editor is available that permits direct manipulation of objects and motion paths. Multiple light sources are also permitted. Real fun begins with displacement mapping: Each input to the DVE can independently be displacement mapped using the luminance of any image clip as a measure for the displacement. Rendering does support highlights and very quick antialiasing.
- The Wipe Library is a collection of predefined wipe patterns that have been created with a single effect, that is also available separately as a universal “Stripe Generator”.

### 3.4.3 FX

In the FX menu, effects have been reordered in various submenus. The following changes apply:

- Posterization now has a parameter to control the effect
- The HLS correction effect now permits hue shifts, i.e. colour rotation on the colour circle
- A new effect is added to the Booleans, permitting independent geometric grow or shrink for each channel of the input

- A set of effects for interlace processing has been added
- New pattern generators for wave and stripe patterns are available. The wave pattern generator can produce circular black and white wave patterns with any number of independent sources, while the stripe pattern generator does roughly the same with intersecting rotatable stripes. If the stripe pattern effect is used with inputs, it behaves like a wipe - the wipe library is constructed like this. Both pattern effects can be used very effectively as input for the 3D displacement mapping, bump or distortion functions of Jaleo.
- Colour Gradient creates a colour background with an independent colour at each corner. The colours can very easily be set with the new colour view tool to set colour parameters.

### **3.5 Jaleo PLUS**

Jaleo PLUS for ONYX computers is a version of Jaleo that is identical in features to Jaleo Composite, but with two important additions:

- Realtime IO of uncompressed full resolution CCIR-601 video
- Full support for multiprocessing, given highest efficiency to special effects production and CCIR-601 editing.

On a multiprocessor ONYX, quality and speed of editing and compositing complex effects and layer setups is a new dimension.

### **3.6 Raw Partitions**

Jaleo Composite does now fully support data storage on raw partitions, i.e. partitions not under control of the SGI filing systems, but completely managed by Jaleo, exclusively for image storage. This provides significant performance increases. A number of management tools to handle data on raw partitions is also included. All Jaleo tools support raw partition storage.

### **3.7 Jaleo RotoPaint**

RotoPaint is the rotoscoping and paint option for Jaleo Composite and Jaleo Plus. It provides for quick and easy processing of image sequencing. Aside of a range of paint and vector tools, it also includes the capability for vector paint, permitting to edit brush-generated shapes like any constructed vector shape, including movement, deformation, deletion and changes of attributes, like colour, brush size, paint type etc.

### **3.8 Documentation**

Jaleo 2.1 is delivered with an all new documentation set, containing extensive explanations of Jaleo concepts as well as reference information on effect operation that considerably exceeds the documentation previously provided. The Jaleo Documentation set includes

- these Release Notes
- an Installation and Setup Guide
- the Users Manual



- an addendum to the Users Manual, including documentation on realtime IO tools, backup and restore, file and license management as well as the RotoPaint Manual

## 4. Last Minute Additions

### 4.1 Key Effect External Key

The External Key effect combines two image tracks in a way that the first input goes to the image channel of the output and a black and white version of the second input is piped to the mask channels. This is used to add key information taken from an external source to a keyless image.

#### Inputs

The External Key effect takes two inputs:

- Source for image channels
  - Image Only
- Source for matte channels
  - Image Only

#### Outputs

- Image: The image channels of input 1 are piped through unmodified
- Mask: A black and white version of the image channels of input 2 is placed in the mask

#### Parameters

- Invert: Allows to invert the matte before output

#### Comments

External Key is a simplified version of Key Color, only leaving the Invert parameter of the Key Color parameter set.

In case you do not need the additional parameters of Key Colour, External Key is preferable because it computes more rapidly.

#### See Also

Key Menu: Key Color

Usage Notes: Using External Mattes

### 4.2 Key Effect Luminance Bands

The Luminance Bands effect is used to create a luminance key that can be controlled independently for three luminance bands, i.e. for areas of low, medium and high luminance. The effect is very useful to create a brightness-selective mask for application of the effect functions in the FX menu. A typical application is for example a color correction of medium bright tones.

#### Inputs

The Luminance Bands effect takes one input:

- Image Only

## **Outputs**

- Image: The image channels are piped through unmodified
- Mask: A mask is created dependent on the parameter settings

## **Parameters**

- Low: Key Intensity for areas of low brightness
- Mid: Key Intensity for areas of medium brightness
- High: Key Intensity for areas of high brightness

## **Comments**

None.

## **4.3 Group Trimming**

Groups can now, within limits, be trimmed like image clips. If you hold the <Alt> key while using the right and left mouse button for mouse based trimming, groups can be stretched without timewarping. Note that this should currently not be done with groups that have a timewarp curve.

## **4.4 Group Splitting**

Groups can now be split. However, Joining is not possible yet.

## **4.5 Automatic Clip Creation from Images Dragged to the Reel**

You can now drag single images in any of the supported formats directly onto the reel window. This will cause a dialogue to open, asking you under which name you want to create the clip.

## **4.6 User Scripts called from IO**

The IO subsystem now can call a shell script after a frame is read or a frame is written. To activate this feature, switch on the toggle button in the IO window (the button that previously was labelled Process under the Reference toggle).

There is one script, called `input_process`, that is called after a frame has been read into Jaleo. It will receive a single parameter that is the name of the image read. Depending on the source for the input image, this name may or may not be usable for you. Typically, you will only want to use this feature for Disk or DDR IO.

The other script is called `output_process` and it is called after a frame is written. A typical use would be to count frames written to a DDR and, after a certain number, create an automatic writeout to a VTR.

## **5. Remarks, Known Problems And Workarounds**

### **5.1 Simultaneous Access Problems**

#### **5.1.1 Simultaneous Writes to Raw Partitions**

Simultaneous attempts to write to a raw partition may create disastrous results. For safety of your data, it is highly recommended not to use two applications that can write to a raw device at the same time. These include:

- Jaleo (writes for caching, Group Render)
- RtVideo application for the Sirius (Jaleo PLUS only)
- IO subsystem
- rmRaw utility
- compressRaw utility

Again, using more than one program able to write to a raw partition at the same time is highly dangerous. Always terminate one program and then start the other.

#### **5.1.2 Simultaneous Access to Sirius/Cosmo**

Unfortunately, the same advice must be given for two applications accessing the Sirius or the Cosmo/Galileo at the same time. Just do not do it. Applications that can access the video hardware directly are:

- Jaleo
- RtVideo application for Sirius and Cosmo
- IO subsystem
- Flipbook

Simultaneous access can have any effect from bad results to sever system crashes. Please terminate one application before you start the other.

### **5.2 Timestretching**

#### **5.2.1 Timestretching and DVE Effects**

It has been noted that some users have tried to use the timestretching of a group to make longer a given effect. For example, after creating a DVE move of 25 frames, it was placed in a group and the group than stretched, expecting a DVE move of for example 100 frames after extending the length of the group respectively.

Although the total length of the effect created will be 100 frames, the effect may be quite unexpected. You must be aware that timestretching does not operate on timecurves of effects included in a group, but on the images they produce - if you have material of a length of 25 frames in your group, the input to the timestretching are these 25 frames and not more, no matter how this mate-

rial is created, i.e. if it is created using an effect or if it is a raw image clip. Timestretching always takes the images and interpolates between them.

Timestretching is an effect. It can be used effectively for fitting material with slight stretches, or to create weird special effects if used with larger amounts of stretching or squeezing and non-linear curves. It should not be used, however, to stretch effects to a new length.

### **5.2.2 Timestretching and Alpha**

Using timestretching of groups with alpha generally is not recommended. Normally, you will get much better results if you do a composite inside of the group and then stretch the whole grouped composite.

## **5.3 Monitor Behaviour**

### **5.3.1 Raising Hidden Monitors**

In the Reel menu, the setup option Raise Monitors, does not, as the manual text might suggest, immediately popup monitor windows that are hidden or iconified. Instead, if the Raise Monitor option is activated, hidden or iconified monitors will be raised to the top or opened whenever the monitor is updated.

### **5.3.2 Monitor Window with Live Video**

Monitor windows in Live Video mode do show a flat color image. This is of course not the ideal way to fill your screen. When using output to live video, you should switch off the Raise Monitor option from the reel setup menu; this will permit you to keep the monitor windows iconified.

## **5.4 Cosmo Compress**

Jaleo Composite is very flexible in its usage of the Cosmo Compress board: In a single reel arrangement, you can freely mix compressed material with uncompressed images. You can even use compressed clips of different quality levels at the same time. This enables you, for example, to create a large production with a lot of background material and just a few bluescreen shots very economically: You can store the large stretches of uncritical material in compressed, and still achieve high quality chroma keys where desired. In short, you can keep your material as it is appropriate for the job at hand. Jaleo will not impose any constraints on your choice of material.

This flexibility, though, has a price: Real time playback of full resolution compressed video is restricted to the RtVideo application for the Cosmo. You can not playback cosmo compressed clips in full resolution directly from the Jaleo Reel window. The reason for that is a technical limitation of the Cosmo Compress board: First of all, it does only support a single stream of compressed data. Second, data compression is only fast if performed between video and disk, not to the system main memory. For the type of flexibility as offered by Jaleo, it is simply necessary to pipe the image through memory and some processing, instead of just having them sent directly from the disk to the video out. As memory decompression is too slow for full size images, in the reel you will usually only be able to do preview resolution real time playback.

### 5.4.1 Cosmo RtVideo Application

If you open the preview window of the RtVideo application for Cosmo, for the first preview, the images are not visible in the window. With the second preview, it works.

## 5.5 Drag&Drop Interaction

### 5.5.1 RtVideo

In the RtVideo applications for Sirius and Cosmo, a small bug with drag&drop may appear when dragging filenames to the clip name input field. You can use a name as dropped to the field without problems. If you, however, clear the field by selecting the text and pressing backspace, sometimes some invisible characters remain in the field. You can use the keyboard arrow keys and backspace to get rid of these before you enter a new name manually or with drag and drop.

### 5.5.2 Desktop Icons

The desktop icons for the IO devices are only handled correctly with drag and drop if the original device name is used. If you for example have three icons for the Accom, corresponding to three different device configurations, called `Accom.dev`, `Accom2.dev` and `Accom3.dev`, it is very likely that only `Accom.dev` properly reacts on drag&drop.

There is a workaround for experienced SGI user: The `jaleo.ftr` file in `/usr/lib/file-type/install` can be edited to accommodate the new names. If you then execute `make` in this directory and the directory above, the new rules will be in place. Always make a copy of the file-type rules file before you make changes.

## 5.6 Movie Files do not Support Alpha

If you render to a clip with movie file format selected for storage, you can not select alpha rendering, as the SGI movie format does not support alpha.

## 5.7 Exiting Jaleo

On IRIX 5.3, the exit dialogue that prompts you to save your work sometimes appears behind the reel window. You can access it by forcing the reel to the background (`<Alt>F3`), or by moving the reel window away.

## 5.8 Group Render

### 5.8.1 Group Render Destination Filename

When you enter a clipname for a Group render, do *not* enter a name of a clip that already exists, or at least not a clip that at the same time is used as input to the group you intend to render.

Doing so currently may destroy your original clip data without warning and the group will not render correctly.

## 5.8.2 Group Render and Movie Files

If you do a group render to a movie file, the small scale images are always compressed to JPEG. This inhibits realtime preview; if you must render to movie files, do not use the Group Render but the IO, that is much more flexible.

## 5.9 RotoPaint Temporary Storage

If you are creating a new clip with RotoPaint and your temporary storage is on the same filesystem as your clip image directory than you may have a problem if your disk is quite full: You must have a bit more than the size of clip as free disk space to be able to save a clip. If your temporary disk is full while creating a clip, and your clip directory is on the same filesystem, you will not be able to save your clip.

## 5.10 Sirius Video

On some ONYX configurations the following effects have been noticed:

- On some IRIX 5.2 ONYXes with Sirius software version 1.02 sometimes an additional thrash frame is recorded after the desired recording. The frame range of the recording itself is correct though.
- On some IRIX 5.3 configured systems with Sirius software 1.1 sometimes an additional blank frame is written in front of your recording. Again, the desired recording range is recorded correctly.

In case your system exhibits any of these behaviours, please contact CIC or your dealer or distributor.

# 6. Changes in File Locations and Configuration Files

## 6.1 HOME directory of Jaleo:

As in version 1.8, some setup files are still located in the home directory of a user dedicated to Jaleo. However, all other program files now are located in the directory `JALEO-ENV` of the default Jaleo user, normally `jaleo2`. It is now possible for other user accounts to refer to these files and to use Jaleo; these additional accounts must be setup with the `makeEnv` utility.

For a full description of the new directory structure, please see the installation and setup guide.

## 6.2 Configuration Files

There are changes to Jaleo configuration files. Some very important changes are listed here, you should however in any case see the installation and setup guide for proper setup of Jaleo 2 installations.

### 6.2.1 File `.jaleorc` (`$HOME/JALEO-ENV/.jaleorc`)

The main Jaleo configuration file is nearly the same as in the previous version. Some new configuration entries are available:

- **TIMESAVE**  
Time between automatic saves, in seconds
- **RENDERPARTIAL**  
Target device for Render Group.  
(`Disk.dev` and `Raw.dev` are available).
- **CACHEDEVICE**  
Target device for explicit caching (`DiskCache.dev` and `Raw.dev` are available). The corresponding device files must be set up correspondingly. The default, `DiskCache.dev`, writes in `/usr/tmp` by default and thus should be reconfigured for your system. It is better though, to configure the system for raw device operation.
- **PAINT\_TMP\_DIR**  
The directory for temporary storage of paint. If it is on the same filesystem as your clip directory, always make sure you have enough storage (at least twice the size of the clips you want to process).
- **PARALLEL (JALEO PLUS ONLY)**  
Number of CPU's to be used for multiprocessing.
- **REALITY (JALEO PLUS ONLY)**  
Indicates availability of a Reality Engine subsystem for image scaling.

### 6.2.2 Device Configuration

DDR device configuration files must be reconfigured for Jaleo 2.1. In particular, you must now always specify the `IMAGESIZE` keywords.

### 6.2.3 Other Configuration Files

A set of new configuration files with the extension `.cfg` is located in the directory `JALEO-ENV/etc/devices`. See the setup and installation guide for more information.

## 7. Copyright Notice

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