

# Style for transition - Threshold effect with the Levels settings

With PTE9, in the penultimate line of the "Animation" tab (window "Objects and Animation"), we find the "Color correction" parameter. It allows you to add filters, and among them, "Levels", "Hue / Saturation", "Toning"...

The "Levels" filter offers three settings :

Black point      0 by default  
Midtones        0 by default  
White point    255 by default

## What is the purpose of the values of Black point and White point ?

In an grayscale image, the black points have a 0 level, the white points 255, and the gray points have a level between 1 and 254.

If in the filter "Levels", 104, for example is selected for the "Black point" value, all (gray) points, whose level is less than or equal to 104, will be assigned the new value of 0. So all these gray points become black. Therefore the value 104 is a threshold below which everything is black.

Other points whose gray levels ranged from 105 to 255 are hereby relid to vary between 1 and 255.

Similarly, if you chose, for example, 186 for the level value of the "White point", all gray points whose level is greater than or equal to 186 will be assigned the new value of 255 and become white. Thus the value of 186 is a threshold (or rather ceiling!) above which everything is white.

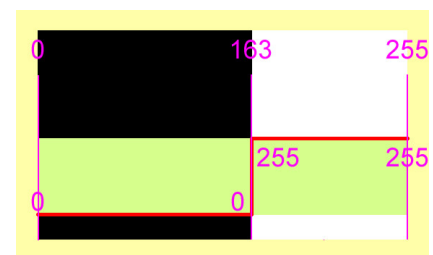
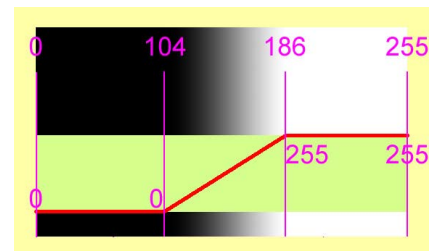
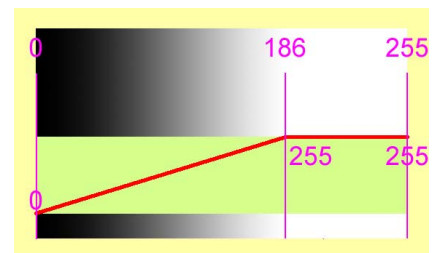
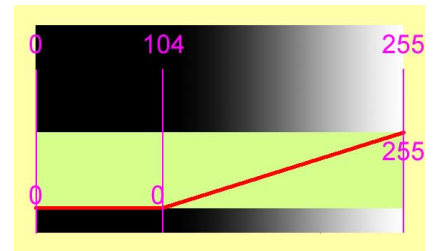
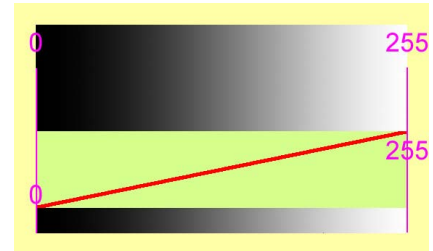
The points whose level is lower than 186 will be modified and ranged of 0 to 254.

If you choose a value of "Black point" (for example 104) and a "White point" value (for example 186), you will obtain :

- black points (0) for all the points which the level was less than or equal to 104.
- white points (255) for all the points which the level was above 186.
- gray points, with a level ranging from 1 to 254 (253 ?) for all points whose level was between 105 and 185

If we choose the same level value for the "Black point" and the "White point", for example 163, the grayscale image does include only two values : 0, Black for the points which the level was less than or equal to 163, and 255, White for the points which the level was above 163. There is no transition grayscale area.

All the grayscale pictures - or black and white - can serve as a mask in "Mask Stencil" of a "Mask container".



Thresholds 35 and 35



Thresholds 35 and 60



Thresholds 105 and 105



## TRANSITION by threshold effect

The principle is to give the same level value to the "Black point" and the "White point", and to vary simultaneously the two values from 0 to 255, to show gradually the lightest to the darkest points.

One might think to affect the level 255 to the "Black point" and "White point" for a **first** key frame, and level 0 to the "Black point" and "White point" for a **second** key frame. Unfortunately, PTE 9 does not vary these values continuously : it goes from one to the other value by a usual fade. Thus, it is necessary to use many key frames. More there will be many, more the transitions will be "continuous" (The jumps from one level to another will be imperceptible). So one can use 256 key frames as there is 255 gray level, and a white value.

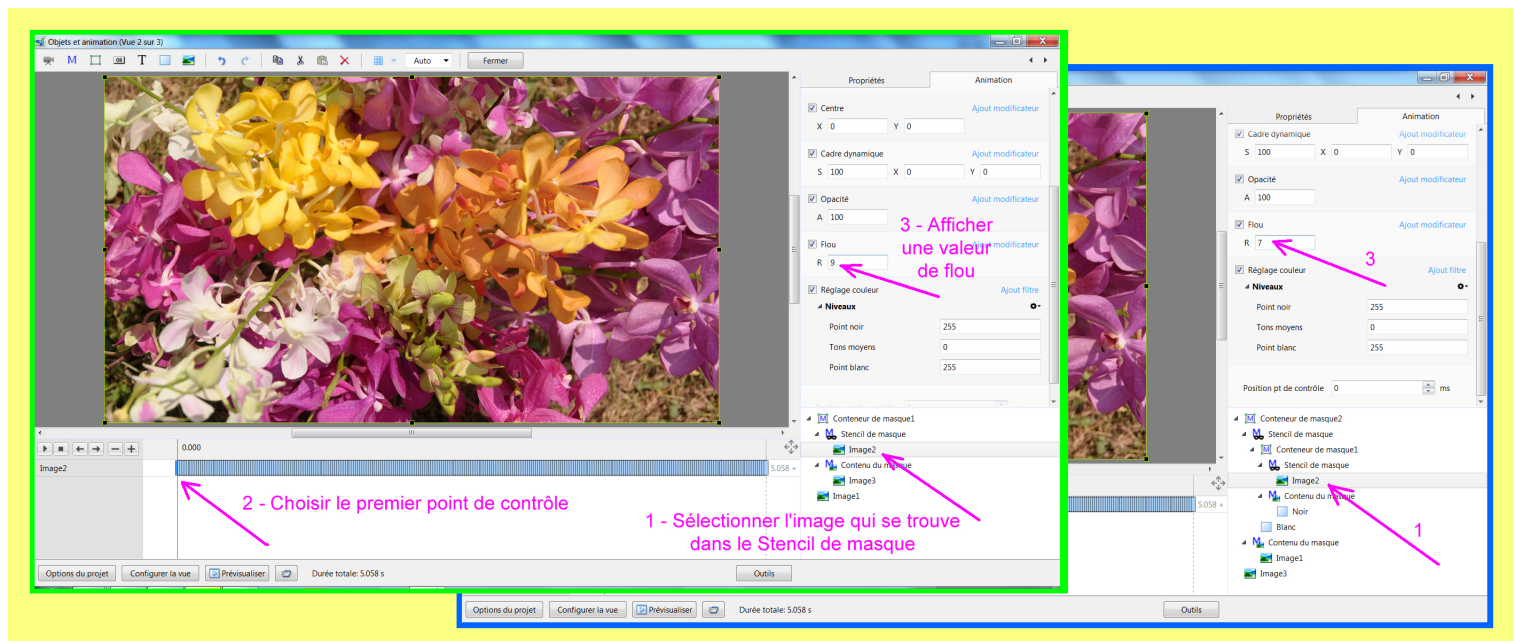
This is a difficulty for the "ordinary" user. But thanks to personal transitions and styles, everyone can use a file made by someone who knows how to use spreadsheets (such as Excel).

### Note 1- Softness and Blur.

We have seen in the example I have given, that there could be a gradient zone between a black section and a white section, this in case there is a gap between the level of the "Black point" and that of the "White point". Later I called the gap "Denevele". The progression of the animation is softer, while the sharpness of the image is maintained.

With PTE 9 you have the opportunity to make a little blurred mask/image, which adds a little sweetness to the transition. Advantages and disadvantages compared to the gap "Denivele" ? Nothing special, it probably depends on the image of the mask. Try values of 5 or 10, do not use excessive values.

For this, once the style has been applied, you select - 1 - the mask (by clicking the name of your image 2, which is in the "Mask stencil"), and - 2 - its first checkpoint (by clicking on the left of the key frames). And - 3 - you display the desired value.

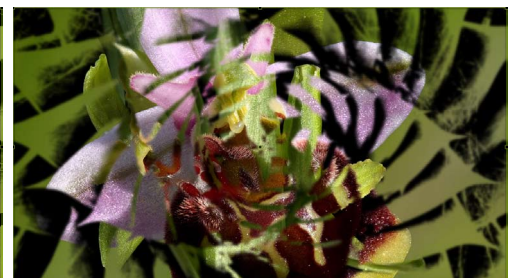
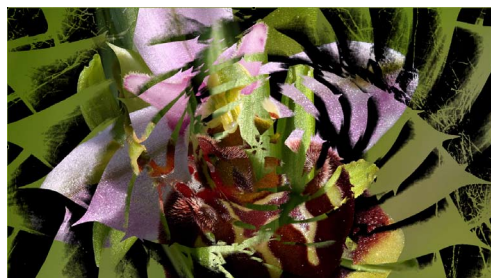
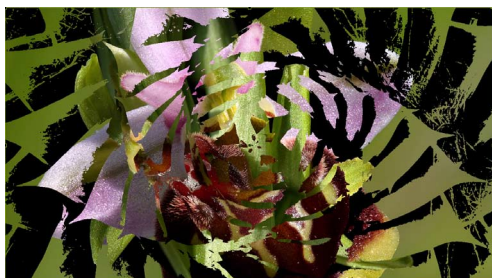


Note the differences (low on these thumbnails), for example in the upper right corner.

"Standard"

"Denivele"

"Denivele" and Blur 10



## Note 2. Grayscale and Color.

We used to use a grayscale mask. This gray mask preserves the colors of the image put in the "Mask content" (the final image). You can also use a colored image/mask. But a colored image/mask has Rouge, Green, and Blue different values, the thresholds for these three colors will therefore come at different times. This can give **effects quite interesting**. We can also try to change beforehand the hue of the image/mask (Photoshop...) for other dominant colors.

But the use of colored image/mask does not always lead to interesting things, and this can make a mess in classic slideshow. Better then to have a grayscale mask. So why not just use filters "Hue/Saturation" or "Toning" to use a color image initially, and easily transform it in grayscale with PTE ? As demonstrated by Denis, with the filter "Hue/Saturation" or with the filter "Toning" PTE stammers for what we want to do when one of these filters is enabled. Thanks Denis for this work.

It is still possible to transform a colored image to a grayscale one, due to the possibility offered by PTE to put a "Mask container" in another container. Thank you to Pascal / Paich, which reported on WnSoft that he have used this technique to this effect, a very nice trick I return here with his permission. Thank you Pascal.

Desaturation, Toning, and nested Mask containers are three *automatic* techniques. A separate manual labor (for example with Photoshop) probably provides more interesting results ? But so much more tedious to obtain, if the original image is not so bad as that, to be used as it is !

**Mini note 3.** PTE does not display completely black points (if any, of level 0) by the couple "Black point" 0 and "White point" 0. This state, at the end of the transition, lasts only a split second as the normal image3 soon appears, and this little fault is surely hardly noticed. But Pascal had taken care to explain how he solved this little problem, I could not snub his trick and not to use it. Thank you Pascal.

## STYLE OR TRANSITION ?

For the author of a style or of a transition, the difficulty (all relative if he knows how to do) of their production is the same. For the user, I think it is much easier to make changes in a slide provided by a style, rather than to modify a transition. Thank you Denis, for your style, allowing to compare these two methods.

I chose to leave the greater ease and freedom to the user by allowing him to **choose himself the mask** he wants. Styles ask 3 images, the simplest being to choose **3 slides, the first containing the starting image file, the second slide, the image file to serve as a mask, and the third slide the file of the final image**. The three images are required.

I recall that each file must be indexed (Index 1), which is done automatically by PTE if we drag / paste the image from the file list into the slide list. On the contrary, if an image is put in a blank slide, indexing does not happen automatically.

I also remember that it is pointless to change an image in a slide, PTE uses only the indexed file in it, and ignores any changes that could have been done : rotation, opacity, color, blur, zoom...

If you want an image of a uniform color, black, blue ... it is necessary to have a file of that image. It is not possible to use the PTE' "Rectangle" that can not be indexed. But provisionally you can use any file to apply the style and then, once that is done, replace this file by a PTE' Rectangle.

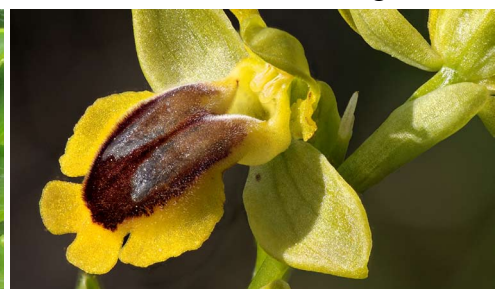
Slide 1 Initial Image



Slide 2 Mask (here a natural pattern)



3 Slide Final Image







Slide 1 Initial Image



Slide 2 TRANSITION



3 Slide Final Image

**Styles provide three slides, the first slide shows the initial image, the second slide is the transition itself, and the third slide is for the final image.**

You can modify each obtained slide, in particular its duration. For the slide 2 (the transition), when modifying its duration, it must be ensured that the "Scale key frames in objects (on time change)" is checked (in the bottom of the "Main" tab of "Slide Options", where one changes the slide duration, at the top).

For both first and third slide, this option is irrelevant - there is still a single key frame. These two slides are without transition. We can add one at the first slide. We can, of course, change their duration that I've limited to 2 seconds (that naturally encourages change !). And thereby, this allows not to wait too much in the styles' window, watching the chosen animation, and compare styles between them. (I noticed that if the third chosen slide was followed by another slide, style restored a third slide with a duration other than the required 2 seconds. Without a doubt, a small bug of PTE).

## **SPEED (transition time)**

I've chosen 18 ms between two key frames, each key frame being well addressed by PTE when the computer displays 60 frames per second. We can of course shorten the total duration, but I find that 4 to 5 seconds to appreciate the transition is not too much, if of course, the transition itself is of any relevance. To each one to decide. It's very easy to change the total length before applying the style. For example if we need a strict 2 seconds transition we can display :

230 as a speed value for a "Standard" style.

253 for a "Denivele" style with a gap of 25 levels (Softness more important)

or also for these styles a little particular 116 (duration 5.445) for the style "Pair Grise Standard"

139 (duration 4.886) for the style "Pair Grise Denivele"

The animation is visible and useful to compare and choose the styles, and adjust the speed (the duration of the second slide returned by PTE - the transition itself - can always be changed later, as already reported).

## **IMAGE TO BE USED FOR THE MASK : slide 2**

This image will be placed in the second slide to be selected.

For a "classic" transition, we'll choose a grayscale **image**, such as those contained in the transitions offered by Denis, Pascal... One can of course, use any pattern you chose yourself, possibly a colored picture or a pattern previously worked (with Photoshop-type software). Fractal pictures can be interesting to test (but personally I do not find them easy to choose). We find a lot of them on the Internet.

Can also be used as a mask, the image of the **third slide (final image)**. We then see the image of the slide 3 appear gradually, not the whole picture as with a fade, but beginning by the clearest parts. Interesting fact emerges when there is a clear pattern, flower, butterfly ... The chosen image can be as it is (or produced and processed in grayscale - or not - previously with Photoshop) or transformed in a grayscale by a style "Grise". *I find that this combination (same image for slides 2 and 3) can often advantageously replace a simple fade. I really like it very much.*

And why not use the **first slide (first image)** ? In this case, during the transition will be seen the lightest parts of the first image replaced by the third image. Interesting again with clear patterns. Image as it is, or pretreated, or transformed in a grayscale by a style "Grise".

**So here are three ways to use the same style !**

## GO BACK ?

What if instead of varying the threshold from 0 to 255, they were made to vary from 255 to 0 ?

This is of course entirely possible. Interesting case: if we swap the original first and third images of a previous transition, we get a reverse animation. (But note that with the same starting image and the same final image, two different animations are obtained in the normal case and in the reverse case).

To resume the three cases described above, a grayscale pattern would probably not really change the way to see things. On the contrary, with an image, it's more interesting. The clear areas no longer appear first, but last.

If we choose the first image as a mask (the first image is therefore also put on the second slide), it is the bright areas of the first image that will appear lastly. Similarly if we choose the third image as a mask, it is the light areas of the third image we will see lastly.

## BURN THE CANDLE AT BOTH ENDS ?

We saw that a normal transition did show clear areas first, and that the reverse transition did show shadows area first. And what if we combine all this, to see immediately shadows area together with the highlights, and ending with the midtones ??

Again it is possible. Serious people must remain at the "Grise" (greyscale image). Indeed keeping a color mask, you get often very colorful transitions, sometimes very psychedelic ! The reason is that the mask must be a negative one for the dark tones. This changes colors of the transition a lot.

If you find the result too colorful (blue, often), once style is applied, you can change the colors by switching the "Mask containers" : Right click on the normal container, Order, and Bring to front (or CTRL + Shift + PageUp)

**NB** One could undoubtedly produce animations where the midtones appear first. Since I do not know the welcome will be made to these styles, I stayed there !

## THE STYLES AVAILABLE

There are 3 versions of 4 different styles producing transitions between two images :

- 4 styles where the light tones appear first,
- 4 similar, but "Inverse" (=Reverse) where shadows appear first (the clear areas appear at last)
- and 4 other similar styles "Paire" (= Pair) where shadows *and* highlights appear first (the midtones at last).

The twelve styles are visible in the Style window (which can be enlarged), "JCV Transition effet de seuil" tab. After selecting 3 slides / images on the "Slide list", and click the "Styles" button, you can easily compare the 12 realized effects as well as the speed of the realisation.

You can intervene in the animation of the small window. Stop the movement by clicking on the window, and realize the animation with the cursor.

You can choose to have :

- a mask in "Couleurs" (= Color) — or grayscale : "Grise" (= Grayscale) made by the style,
- with a gap of 25 levels between the "Black point" value and the "White point" value : "Denivele" (= Gap, or Height difference) — or without gap : "Standard"

I've chosen the values of the level gap (25 levels) to fill all the many key frames for the "Denivele" styles. You can not change this value yourself. This choice (and possibly a blur value) allows to soften the transition.

If the names of these styles do not "talk" to you, you can still change these names. Click on the name to edit, then on "Tools" and "Rename style" . Set a new style name, and "Rename"

Remarks :

If you want to use as a mask (slide 2) a grayscale image that you have yourself refined, choosing "Couleurs" or "Grise" does not matter, gray shades of the image is not altered by the technique used here to obtain a grayscale image.

Filters levels only appeared with PTE 9. It is therefore not possible to use these styles with a previous version.

Except error on my part, these styles can be used for other ratios than 16/9 with which they were made. It is therefore strongly recommended to use images of the same ratio as the project itself.

Thank you to forgive my (probably many) English translation and grammar mistakes.