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# True fake anaglyphic 3D

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In a previous article, I presented [fake anaglyphic 3D photos](#): it was only a quick and dirty **manipulation** in Photoshop. The result was **a bit « flat »**, and often left you **cross-eyed**.

## ■ True fake anaglyphic 3D explained

Going deeper in my **research**, I found out that a trick is used in movies: the films are shot, and **3D is added later!** They are using what is called a **depthmap**.

The *depthmap* is a special **grey-scale** version of the original photo. The levels of grey represent the **depth value of the objects**. The most famous norm tells that lighter greys are near, darker greys are farther (neutral grey is the 0 position).



© AbsurdePhoton

Un joli papillon accroché à une feuille - Accroché



Le même papillon, vu au radar de profondeur (depthmap)

From this *depthmap* that gives a **distance from the eyes of the observer**, we can use simple **mathematical calculus** to create a **shifted image** from the original. Imagine that this shift represents the distance between the eyes...

Let's say that the original image is the one for the **left eye**. By **computing the shifted image** for the **right eye**, we obtain the basis of anaglyphic 3D, it's that simple!

Well, it's not *that* simple. **It takes a lot of time**: each image has to be **cut out** in depth zones, which is an entirely manual operation. Then, **the shifted image is computed** (the *Displace* Photoshop plugin is perfect for that), then *recombine* the « left » and « right » images.

Cutting out the image in zones is **so painful** that I tried several ways:

- **manually**: requires a graphics tablet and a **lot of patience**
- **cut-out plugins** for Photoshop: I tried them all, but **none was precise enough** to obtain a correct 3D rendering

- the last solution I'm currently working on is using **artificial intelligence**: the advances in **deep learning** these last years are **promising**, and I'm still studying the subject

You have to know that **I spend at least four hours per image** for the moment!

## ■ True fake 3D examples

Now you can see a few **examples** of my work.

For an explanation of the **formats** used, please read the chapter after the gallery.



- Croc-croc ©AbsurdePhoton -  
Original photo of the squirrel



- Croc-croc 3D (depthmap) ©AbsurdePhoton -  
The squirrel depthmap to compute the left & right images



- Croc-croc 3D (red and blue anaglyph) ©AbsurdePhoton -  
The squirrel in colour red & blue anaglyphic 3D



- Croc-croc 3D (cross-eyed anaglyph) ©AbsurdePhoton -  
The same squirrel in anaglyphic 3D without googles

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- Croc-croc 3D (animated without googles) ©AbsurdePhoton -  
3D animated squirrel without googles



- In the meadow ©AbsurdePhoton -  
The original photo of this beautiful woman in a meadow



- In the meadow 3D (depthmap) ©AbsurdePhoton -  
The depthmap shows the distances: grass, model, background, sky



- In the meadow 3D (red and blue anaglyph, black and white version) ©Absurde-  
Photon -  
Red & blue anaglyphic black & white version



- In the meadow 3D (cross-eyed anaglyph) ©AbsurdePhoton -  
Try to cross your eyes to look at the photo



- In the meadow 3D (animated without googles) ©AbsurdePhoton -  
The angle is a bit different from the original in this animated version

## ■ 3D photo formats used on this site

In my photo galleries where you can find 3D versions of images, you can encounter the following **formats**. Here is how to **visualize** them:

- the **original photo**: it is here so you can **compare** with the other versions
- the **depthmap**: represents the distance in grey -scale of the objects in the original photo
- **red and blue anaglyph**: you need **red and cyan anaglyph googles** (red for the left eye) to visualize the photo with **depth**
- **cross-eyed anaglyph**: for people who don't own anaglyph googles. To perceive depth, no need for googles: you have to **cross your eyes** and **control** them, to try to mix the left and right parts in the « middle ». It requires a bit of **training**, and can cause **strain to the eyes**. The advantage is that the colours are not distorted.  
For more explanations and training, you can follow [this article on Kùla](#).  
Software like [StereoPhotoMaker](#) let you visualize these files, and convert them to other formats
- **Animated**: computing several positions allows to **create a video giving the impression of depth** without googles. Videos are in **aPNG** format: if you don't see

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anything moving, please **update your internet browser!** Only recent releases of Firefox, Chrome and Safari can read them  
To **create the videos**, I'm using a **heavily modified script** from [Ugo Capeto's site](#).

Enjoy my **photos in 3D!**