

# A question of image

## *Introducing Stop-Motion*

*Text and images by Obsoleto*

From the beginning of time, the man has tried to portray all that was happening around them either painting on the inside of a cave, in a huge canvas or in the Sistine Chapel. Curiosity made man mix chemicals and in 1816 create the first negative image, the forerunner of the current picture. But in 1895, man's obsession for perfection makes him put 24 of these pictures into a single negative to create a unique and wonderful second of moving image. That cold morning of December, the first motion picture was presented in France.

Much has happened between December 28, 1895 and August 25, 1978, when the first minifig goes on sale. Much has changed as well since that short film by the Lumiere brothers to the masterpiece of animation that is Toy Story 3.

And it is when the image and LEGO® sets are combined for the first time that projects that unite these two arts arise from the imagination of a few. Those few now are many and active.

### **THEORY OF THE IMAGE**

How many of us have imagined ourselves in the role of the main character in a movie when we saw it at the cinema? The magic of cinema is that their stories, near or far from us, make us forget for a time our surroundings and enter into this world that is before our eyes. The first short films made with LEGO sets and minifigs arise from the need to portray these stories we have seen the day before in the movies but giving it our personal touch. Those who are dedicated to this start from a simple premise: "I can not be Spiderman, but I can make a Spider-Man minifig fly over a LEGO City set".

And how do you make a Spider-Man minifig fly over a set of LEGO City? Very simple, with only four steps:

- Spiderman Minifig
- LEGO City Set
- A camera connected to a laptop
- Much time and enthusiasm

Is anyone surprised I use a photo camera instead of a video camera? I imagine that at this point where we would be able to make "Avatar", nobody is surprised ... and that is because if we record this sequence with a video camera, we would be able to see our fingers moving the minifig.

Returning to the end of the opening paragraph: "24 photographs made a second of motion"

We will be purists, replace "photos" with "frames" and "movement" with "animation".

Good. We already have the set, the minifig, camera, laptop and we know that this work will take a lot of time. What's next?

When I studied Image and Sound, I learned two things in the chapter on American Cinema:

- Their films are industry, not culture
- Their films are made thinking of the viewer, not the argument.

When recording a short film with LEGO figures you have to think how you will distribute it (and if not, why invest so much time and effort...?)

A little more theory:

- I want my movie to be seen online. I'm going to upload it to Brickfilms.com: Select a camera resolution of 640 x 480 pixels and edit it on the computer at 15 frames per second
- I want my movie to be seen in a cinema preceding the second part of Avatar: Select a camera resolution of 1920 x 1080 pixels and edit on the computer at 24 frames per second
- I want my movie to be seen on the Saturday night film show on Channel 1: Select a camera resolution of 720 x 576 pixels and edit on the computer at 25 frames per second.

I don't want to disappoint you, but in the end you'll wind up showing your "wonderful film" to your friends on a computer. So I recommend the first option: the camera at 640 x 480 (the computer will take less time) and 12 to 15 frames per second (duplicating frames in the edition)

## EXPERIENCE IS THE MOTHER OF SCIENCE

If this is your first experience in making short films (and you have time...) I would try the same method that is used by scientists: "trial and error."

Let me explain:

Frame by frame animations recorded with clay, wooden figures, peanuts, minifigs, etc ... is called "stop-motion"

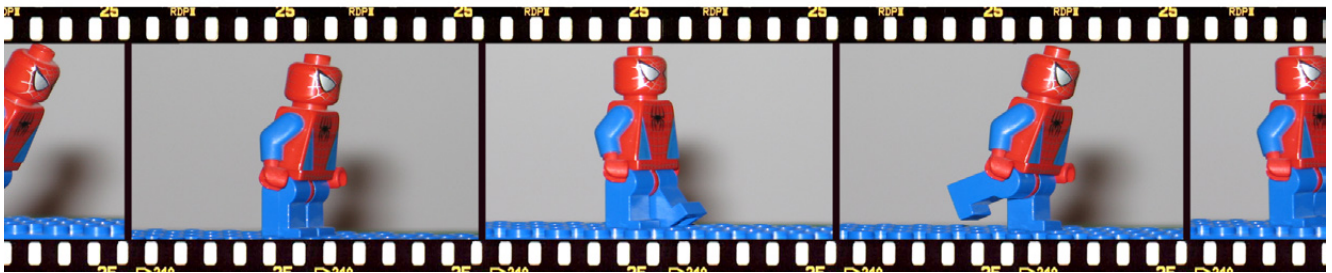
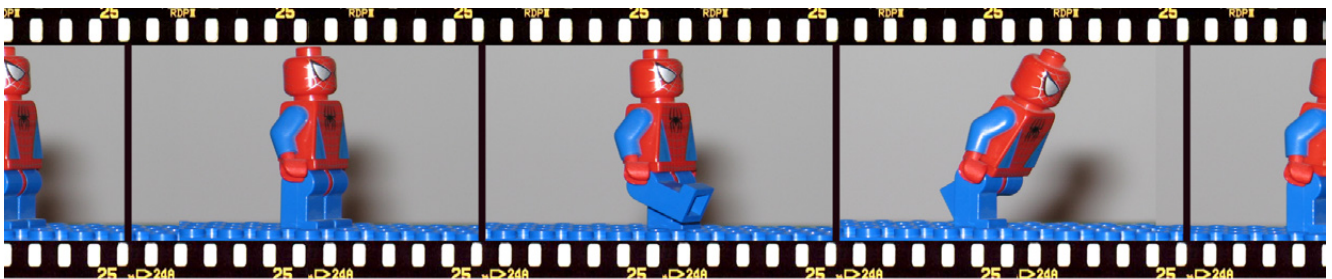
"Stop-motion" is based on: Hand in. I move the doll. Hand out. Picture. Hand in. I move the doll. Hand out. Picture. Hand in. I move the doll. Hand out. Picture ... and so on 25 times to make a second of animation.

My first short LEGO® film I did it that way. I recorded three seconds of animation (75 photos), downloaded them to my computer and joined them with an editing program. Result: the minifig is moving in leaps. That was my TRIAL - ERROR.

Analyzing the failures I saw that I have to show more movement of joints than position changes

The work is meticulous, but it works. Only 6 pictures:

- Minifig with two feet on the ground
- Minifig lifts the right foot
- Minifig body tilted while low right foot. Left foot back
- Minifig stretched with two feet on the ground
- Minifig Left foot up
- Minifig body tilted while low left foot. Right foot back
- Minifig stretched with two feet on the ground (such as Picture 1, the loop repeats)

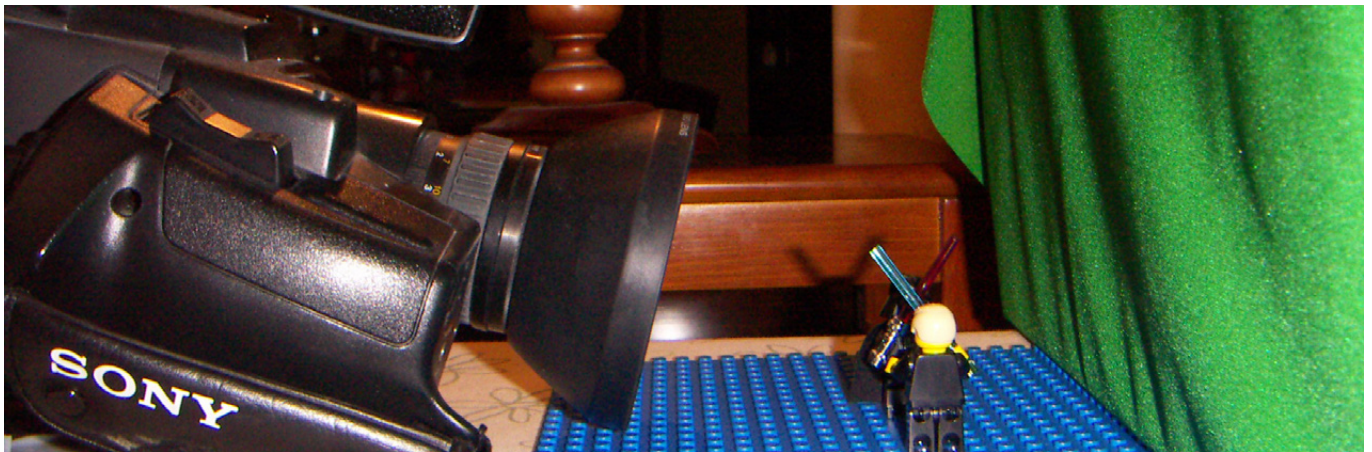


In  $\frac{1}{4}$  second our minifig has completed two steps, and therefore in a second it will have taken eight steps (BLOW! Minifig IS RUNNING!)

The editing program you're using is very important. Personally, I bought "Adobe Master Collection CS4" which includes many "must have" tools for those who do this kind of things professionally, including Photoshop (photo editor), Premiere (video editing) and After Effects (video post-production).

Yet you can find very powerful freeware on the Internet.

The trick to not see the minifig run is related to how you import the pictures in the video editor. I recommend that each photo last two frames. So in a second you see 12 photos and the motion is more realistic (only takes 4 steps).





## MY PERSONAL EXPERIENCE

Since 1992, when I finished my Image and Sound degree, I have been trying to use new technologies for animation. First I started with a short film, then I dared to write a long film and finally, after many curriculum on paper, I got a job in television. The use of LEGO® minifigs in my short films came from the need to make a storyboard. The storyboard is the film in your mind made shot by shot and drawn in pencil. This tool is essential to then explain to the crew what you intend to do. I am a terrible artist, so I started to take pictures of my LEGO.

Then one thing led to another (as I've already mentioned, I've made 75 pictures)...

On the other hand, digital photography was in its infancy, so what I did was use my video camera and an analog video capture card connected to my laptop. Once the photos were on the computer hard drive, I passed them through the photo editor to "eliminate" the cables and impurities arising during the shooting (otherwise it is impossible to make Darth Vader... fly)

The worst part of this work is the amount of time you have to take to make a movie with a decent length. So here I propose you write simple stories, without many effects. Making a LEGO version of Star Wars™ is a big temptation, but forces you to double the time needed because of the frame-by-frame editing to for example simply draw a lightsaber.

As technology progressed a bit more, it was time to take the next step. So, thanks to models already made with MLCad and a wonderful plugin called LDRAW2LWS and the program "Lightwave 3D" I was able to convert the "Millennium Falcon Mini (4488)" into a 3D animation in PIXAR style

The world of digital imaging advances in geometric progression and each year there are new tools that revolutionize the cinema screen. Just when we thought that after "Matrix" everything had been invented, "Avatar" by James Cameron came along in a spectacular 3D.

If, like me, you love the world of image and sound and you are an AFOL, investigate, search, find the right information and try to be the first to make a short "Real 3D Stereo" film, starring a Minifig. Hint: two cameras (right eye, left eye) and a separation of 65 mm between the two lenses.

There you have it.

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