

**Tuesday, May 14, 2019**

## **Astronomical calculations in Art and Science.**

**Before taking a picture of a deep sky or a planet, some astronomical calculations are needed to evaluate the equipment to put in place to photograph the object.**

**The pixel (often abbreviated px or PixL) is the basic unit for measuring the definition of a digital matrix image. Its name comes from the English word picture element.**

**Occupation of a pixel memory:**

**The actual memory space used may be larger.**

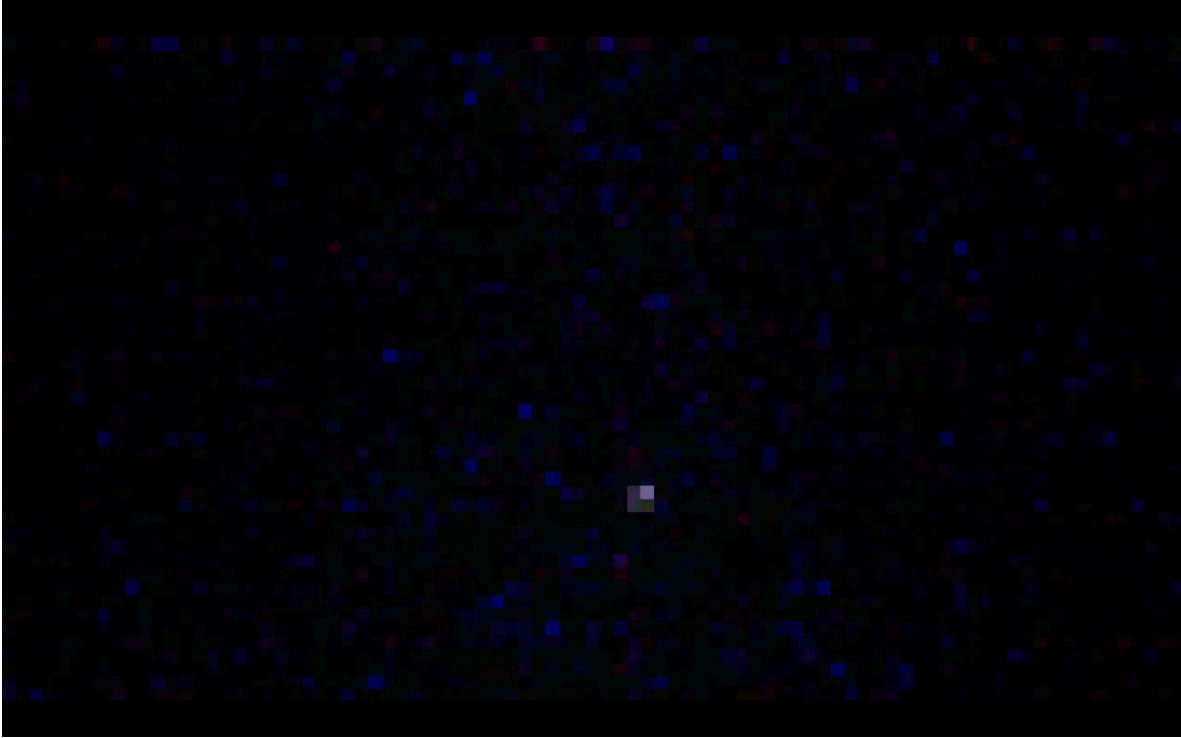
**For example, in 16 million color mode, the pixel sometimes occupies 32 bits (4 bytes), the extra byte being unused, or used to encode transparency.**

**Professional cameras record up to 16 bits per color, or 48 bits.**

**This is valid for the visible information of the pixel, color and transparency, but internally, depending on the system, for example at Silicon Graphics, using 16 bits per color component, an alpha channel, the Z-buffer, quad buffer and 3D stereo and system control bits (for stacking windows etc.), we can go up to more than 640 bits / pixel.**

**Formula: 2 at the power of the number of bits equals the number of colors.**

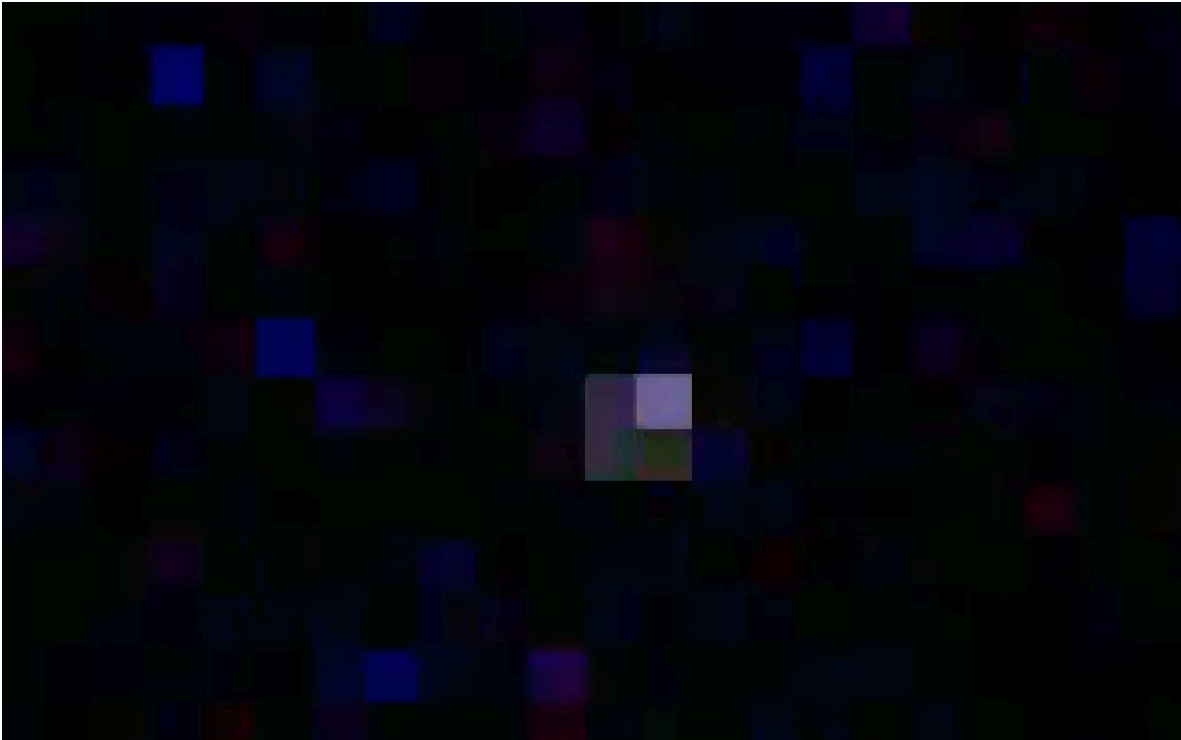
**Each pixel is associated with a color, usually broken down into three primary components by additive synthesis: red green blue.**



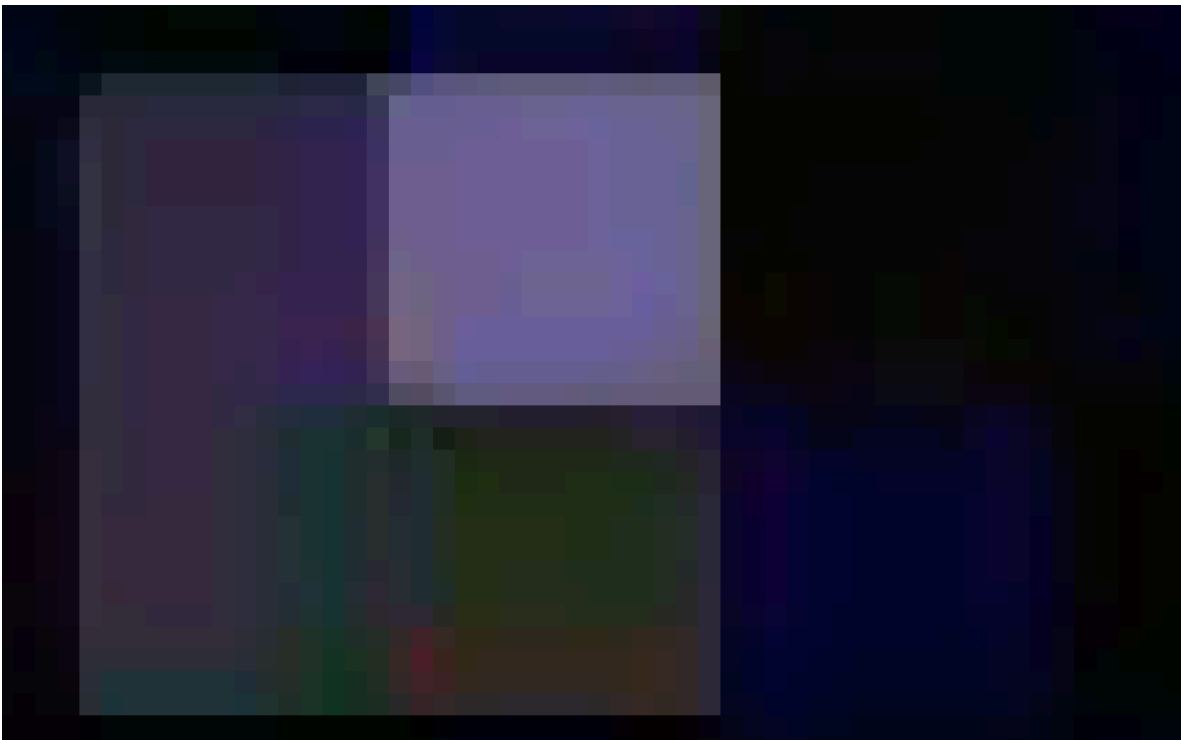
**+ 1 Moon first quarter Saturday May 11**

**Details:**

**size: 4.7 inches, resolution: 1334 x 750 pixels at 326 dpi, contrast 1 400: 1**



+ 1 The same: enlarged



+ 1 The same: enlarged again. (not to the max )

**Created in a search for Art and Science:**

**Visual composition of the Moon and pixels forming a rather magical animated scene.**

[youtu.be/cCgURHpXxWg](https://youtu.be/cCgURHpXxWg)

**Please, enlarge**

**On a television, each pixel is reconstituted by a triad of electroluminescent components, rendering red, green and blue tones by electrical excitation (electron gun cathode ray tube, LED screen, liquid crystal, or plasma)**

**Megapixel:**

**The common unit of measurement for the definition of a digital imaging sensor is usually megapixel (MP).**

**For example, a sensor that renders images of 2048 × 1536 pixels (or 3,145,728 pixels in total) is said to have a definition of 3.2 megapixels.**

**In the 2010s, all commercialized digital cameras have sensors of several million pixels, usually 10 to 36 megapixels.**

**CSS:**

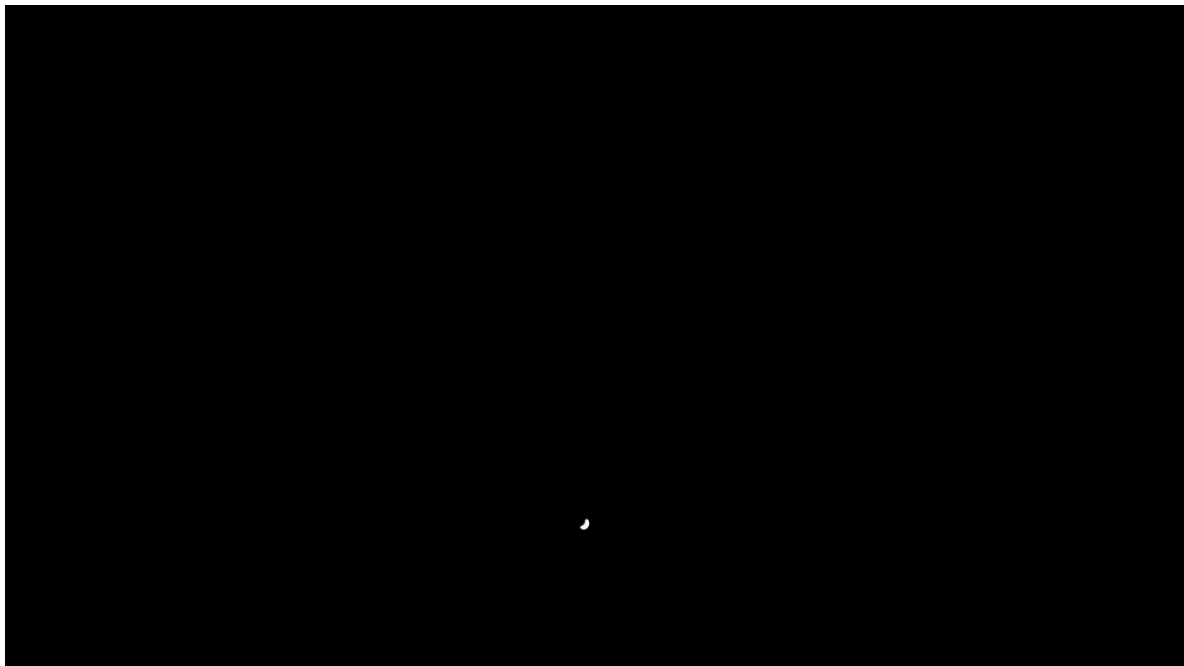
**In CSS, the pixel unit (px) has been dissociated from the hardware pixel to compensate for the increasing diversity of screen resolutions.**

**Thus, when the size of a CSS element is expressed in pixels, the rendering**

will be similar regardless of the pixel density of the display apparatus.

The W3C sets the pixel as 1/96 of an inch.

This has led some browsers to introduce the concept of physical pixel ratio-logical pixel (dppx)

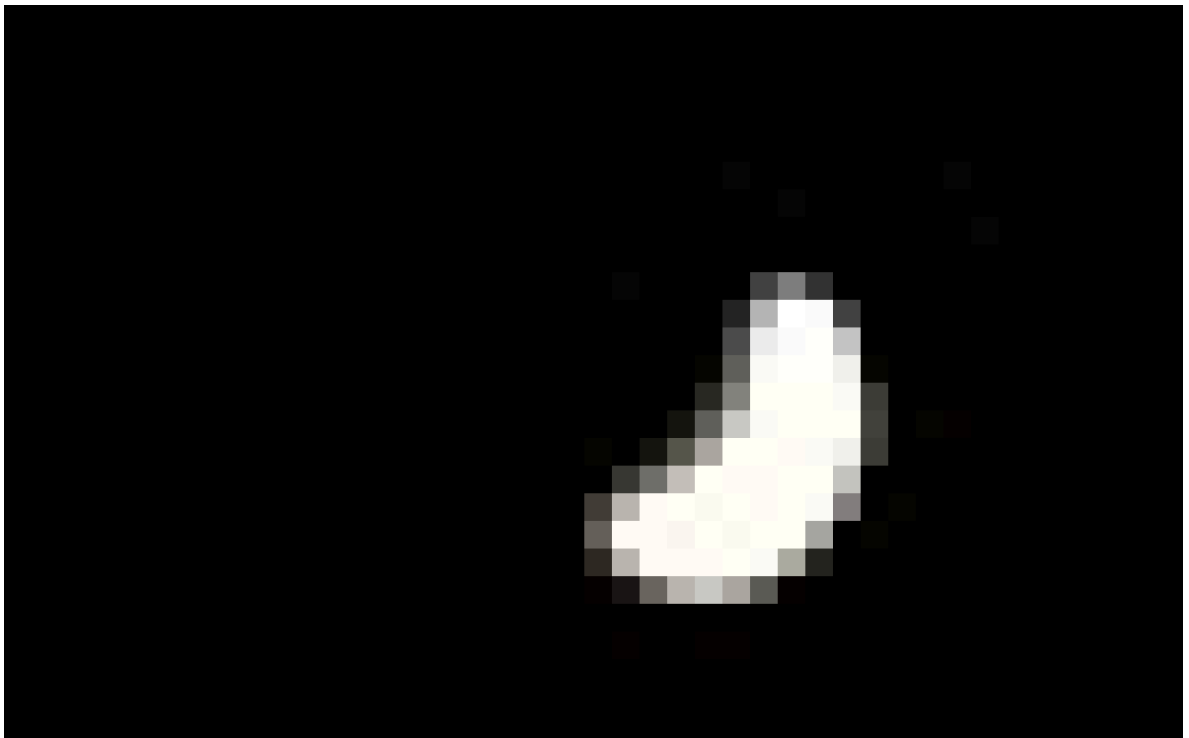


+ 1

The same Moon: taken in normal version, same device.



**+ 1** The same: enlarged.



**+ 1** and, again: enlarged to the max from the basic settings but can be more.

To **follow** , here are **some infos around first analog images of the moon**

**Why ?**

As you can see, the Sun reaction is pretty visible but not only ..

It's a work on the effects captured in the images, thanks to this kind of cameras.

**Updates:**

An abstract has been written as part of the contest:

Wikimedia Heart of Knowledge Contest 2019.

**Summary: why knowledge matters.**

**References:**

- **Mind**
- **The mirror of the soul.**

**11 pages abstract: Available for **readings** and discoveries**

+ By DIALECTIC tab.

Posted by [Veronica IN DREAM](#) at 6:51 PM