

## Re: Webcam video to external storage device

**Source:** <http://sci.tech-archive.net/Archive/sci.astro.amateur/2004-11/1524.html>

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**From:** Anthony Ayiomamitis (*anthony\_at\_perseus.no2spam.gr*)

**Date:** 11/10/04

Date: Wed, 10 Nov 2004 20:54:27 +0200

matt wrote:

>Anthony Ayiomamitis wrote in message ...

>

>

>>Carsten A. Arnholm wrote:

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>>

>>

>>>Anthony Ayiomamitis wrote:

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>>>

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>>>

>>>>Okay, I will go back and check to confirm that the Phillips ToUCam Pro

>>>>740k can accomodate USB2.0 ... thanks for the heads-up.

>>>>

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>>>>

>>Hi Carsten,

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>>

>>>There is no need to check. The ToUCam 740k is USB1.1 only. Of course, it

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>>>

>is

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>

>>>compatible with a USB2.0 PCMCIA card (I use one such card with my 740k),

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>>>

>but

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>

>>>don't expect USB2 speeds.

>>>

>>>

>>>

>>I am somewhat puzzled. I cannot go past 10 fps without dropping frames.

>>In fact, at 10 fps I am also dropping frames whereas there is no problem

>>at 5 fps. With a maximum possible fps rate of 60, what was their

>>thinking? Or is it just for screen refresh purposes only and whereas

>>they expect you to use 5 or 10 fps for image capture?

>>

>>

>>

>>>The reason I am using the PCMCIA card is that the USB1.1 port of my laptop

>>>does not deliver enough power, causing problems. Via the PCMCIA it works

>>>

>>>

>ok.

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>

>>Okay. My sole interest was to supposedly increase the capture rate.

>>

>>Anthony.

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>>

>>

>>>Clear skies

>>>Carsten A. Arnholm

>>><http://arnholm.org/>

>>>

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>

>Anthony,

>

Hi Matt,

>What is the ultimate goal you're trying to achieve ? For what reason do you

>want to increase the frame rate in other words ?

>

>- If it is to increase the number of captured frames, just capture for a few

>more minutes. 10 minutes of avi recording at 5fps gets you 3000 frames , and

>10 minutes is nothing compared to the time it takes to set up the equipment

>for an imaging session , boot the computer, focus, wait to reach thermal

>balance etc .

>

Agreed with the exception that for Mars and Jupiter and, to a lesser extent, Saturn, we are also bound by rotation effects. For the moon and Venus, for example, it is a non-issue. As a result, my only solution is to increase the frame rate within the same time window.

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- >– *If you want faster frame rate to freeze the seeing, you need to actually*
- >*reduce the exposure time not the frame transfer duration in order to freeze*
- >*what's inside each frame .*

>

Agreed and I do exposure for the quickest possible exposure.

- >*There's a catch 22 here, because the only way to reduce exposure time is by*
- >*having a more sensitive camera (you may consider the color ccd replacement*
- >*with a b&w ccd that is a direct pin compatible replacement), or a larger*
- >*scope.*

>

I do have a large scope (Celestron's 14" SCT) and as such I am gathering quite a few photos already .... I just need to capture and save as many of those as possible. :-)

- >*The b&w ccd is easy if you can handle the elec tronics rework, you may get*
- >*one in Europe from Framos .*

>

- >*A larger scope would bring more light and a brighter image but that comes at*
- >*the expense of reduced possibility of lucky exposures .*

>

Lucky exposures are something I can deal with ... I am fortunate to have good transparency as well as good seeing and I am simply looking to get as many good frames for stacking as possible.

- >*See the original Fried paper regarding the lucky exposure probability :*
- >*[http://www.astrosurf.com/cavadore/optique/turbulence/Probability\\_of\\_getting](http://www.astrosurf.com/cavadore/optique/turbulence/Probability_of_getting_a_lucky_.pdf)*
- >*[a\\_lucky\\_.pdf](http://www.astrosurf.com/cavadore/optique/turbulence/)*
- >*or a lay explanation of it with some clear pictures and graphs :*
- >*<http://www.astrosurf.com/cavadore/optique/turbulence/>*
- >*The bottom line being that a larger scope will bring crisper frames with*
- >*better s/n than a smaller scope but at much larger time intervals if the ccd*
- >*is maintained constant .*

>

Thanks for the above links ... I will take a look very shortly!

- > *One other thing that you may consider if you haven't already is to use the*
- >*raw hack for your webcam to increase quality , this being a purely (free)*
- >*software operation is the least costly improvement .*

>

I will look into this as well, for I do recall seeing something about this hack at one time. I have also specified uncompressed mode in K3CCDTools in order to minimize any further image degradation. Nevertheless, I will check into this raw mode as well.

Your input and feedback is very much appreciated!

Anthony.

- >*best regards,*
- >*matt tudor*

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