

MATLAB Video Acquisition

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Dear Group Members

I am working on real-time panoramic video generation using three cameras.

As a prototype, I am implementing the solution in MATLAB, just to see if things work out well. Also, instead of normal CCD cameras I am using webcams as of now. Since the algorithm is still very crude, and is not real-time, I have to capture video streams from the 3 cameras and store them for further processing.

Now the problem that I am facing is of memory overflow. Due to the difference between the rate at which frames are coming-in into memory and the rate at which frames are being stored on secondary storage is quite significant, I always end up getting memory errors (even with 11 seconds of capture).

Settings and Configurations:

Pentium4 3 GHz
256 MB RAM (Cannot be changed, constraint)
3 Logitech USB Webcams
Resolution '640 x 480' (Cannot be changed, constraint)
Frame Rate '6 fps'
Returned Color Space 'Grayscale'
imaqmem '100000000' (100 MB)
LoggingMode 'Disk&Memory' (Memory, for I need the timestamps)
Trigger 'Manual'
FramesPerTrigger 'Inf'
Video stored as 'AVIObject'

Is there a way out to get rid of the memory overflows? What other properties can be tweaked to reduce the memory requirements? Also, any other information, comments or URLs are welcome.

Any sort of help will be highly appreciated.
Thanking You All

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 - ◇ *From:* mlimber

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