Subject: Re: Passing file LUN to C routine
Posted by btt on Wed, 07 May 2003 13:54:55 GMT
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Nigel Wade wrote:
> Ben Tupper wrote:
>
>
>> Hello,
>>
>> I have IDL interfaced (via DLM in C) with a frame grabber for collecting
>> video. I want to pass a file's LUN to C (repeatedly) so that the C
>> routine can write the most recent frame to to the file. My idea is to
>> place IDL in an interruptable loop (widget timer); in each iteration the
>> C routine is passed the LUN, writes the image and then returns a flag
>> such as the number of bytes written to IDL. Later I'll poke around with
>> the images by using an ASSOCiated variable within IDL.
>>
>> It's a reasonable plan that is rapidly going amuck; what I have tried so
>> far causes IDL to crash. I have been using the IDL_FileStat() function
>> to get the required FILE pointer for C. The compiler doesn't C complain
>> about the setup; but it kills IDL when I run it. Methinks
>> IDL_FileStat isn't my friend anymore.
>>
>> So ...
>>
>> (1) How do I properly convert the LUN in IDL into a FILE pointer? (I
>> guess the question maybe better phrased as how do I get IDL to give me
>> the FILE pointer associated with the LUN I pass?) I think I need this
>> because the C routine fwrite requires it.
>
>
> I've never used IDL_FileStat, but I note in the docs it says you have to set
> the IDL_F_STDIO flag or it returns a NULL pointer. This would certainly
> crash your DLM.
>
>
>> (2) Is this creating an unstable situation by leaving the file open all
>> the time until some condition is met in IDL?
>>
>> (3) Would I be better off passing the filename to C and having C
>> open-write-close for each iteration?
>>
>
>
> You could do that, but why not get your DLM open the file and pass back the
> FILE pointer to IDL and then pass that on subsequent calls?
>

>

Thanks JD and Nigel,

The shared memory mapping idea is over my head. It sounds interesting and quite similar to the DMA routines that come with the frame grabber library. DMA, too, is over me.

A third little (expert) bird privately alerted me to the STDIO keyword which I had not set. Just as Nigel points out, I was getting a NULL pointer. Ouch. It was also recommended that I needed to prevent buffering by setting BUFSIZE = 0. It works now. I'll try the passing the FILE pointer generated in C to IDL to see how it works.

So now I have tried it two ways (a lot more actually, but we need not mention those in public!)

(1) pass C the LUN and have the C write each frame: best rate about 15 frames per second (fps)

(2) pass C a predefined array into which it stores the latest frame and return to IDL, then have IDL store the frame: best rate about 15 fps

No difference!

Each of these are performed in a event driven loop where the events are simple timer events with TIMER = verySmallValue. I think I'll try it in just a simple loop for fun.

Ultimately, I would like to access the video at full frame rate (30 fps) - not that I need all the frames, but rather I can be sure I am getting the every Nth frame. I seem to have other problems right now; if I have C grab N frames as fast as it can without sending each frame back to IDL
then I see frame rates as high as 22.5 fps. Hmmm. The promotional stuff that came with the frame grabber says I can get full frame rate. Dang.

Thanks,

Ben