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Subject: Re: Frame Grabbers with IDL

Posted by [Troy Klein](#) on Mon, 25 Nov 1996 08:00:00 GMT

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Rolando Raqueno wrote:

>  
> Does anybody have experience with having IDL control a frame grabber  
> (any recommendations) hosted by a PC?  
>  
> Thanks  
>  
> RVR

It can be done. I'm currently grabbing frames using IDL 3.6.1 on a 486 PC running Windows 3.1 with a Dipix frame grabber.

There were two main problems encountered:

- 1) IDL call\_external uses the argc, argv calling convention, while the windows library supplied by Dipix does not. So I had to have someone write a library to convert the function calls.
- 2) IDL on the PC seems to break up its memory allocation for variables into 64KB chunks.  
That is, you can't transfer more than 64KB of data at a time.

More explanation of 2):

The images that I am grabbing are exactly 128KB. If I create space to hold the image ( IDL> im=intarr(256,256) ), and then pass the variable to the DLL, it is passed by reference, i.e. the DLL gets the address of the first element of image. I can then start filling the image with valid data from the DLL. However, when I cross the 64KB boundary, bad things start happening. Apparently the last 64KB allocated for the image by IDL do not directly follow the first 64KB in memory address space. Therefore, I must transfer each image in two pieces. Not a big deal, but it took us a while to figure out what the problem was.

Has anyone else run into the 64KB limit on a PC, or am I dreaming?

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Subject: Re: Frame Grabbers with IDL  
Posted by [kak](#) on Tue, 26 Nov 1996 08:00:00 GMT  
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Troy Klein <troy.klein@jhuapl.edu> writes:

> Rolando Raqueno wrote:

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>> (any recommendations) hosted by a PC?

>>

> 2) IDL on the PC seems to break up its memory allocation for variables  
> into 64KB chunks.

> That is, you can't transfer more than 64KB of data at a time.

> Has anyone else run into the 64KB limit on a PC, or am I dreaming?

I had the same problem with transferring frames from a CCD camera memory board (16MB per image series). This is a limitation of Win31 because as a 16bit operating system it cannot simply allocate memory chunks > 64kB. There are of course workarounds but they did not work with IDL.

My advice: change to Win95 or better to WinNT4.0 and use IDL 4.01.

In that combination you work completely in a 32bit environment and programming that stuff is a breeze - after you learned it ;-)

One disadvantage: the upgrades will cost you quite a lot and it's some days work to get your computer working again with the new operating system.

Still, IMHO it's worth the effort.

Karl

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