
Subject: Re: Pointers

Posted by [Liam Gumley](#) on Mon, 09 Aug 1999 07:00:00 GMT

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RLeejoice wrote:

> Been using IDL for a year. Want to expand into what I feel are three last
> topics of interest; pointers, widgets, and object graphics.
>
> I've read the entire pointer section of the help file and have the following
> question:
>
> What are pointers used for in IDL. I only precieve that they lead to the new
> object paradyme. Is this correct? I use structures in most of my programming
> and pass the complete structure to the appropaite procedures. I suppose I
> could creat a pointer to a structure, but since IDL passes structures by
> reference, what is the need?

There are at least two cases I know of where pointers are indispensable:

(1) When the size and/or type of an item contained in a structure is not known until runtime (you cannot change the size or type of a variable in a structure). For example, say you have a widget program with a large information structure. At some point in the widget program, you want to be able to select sub-regions of an image and store the data from the selected regions (e.g. to save it to file elsewhere in the program). The most convenient way to save this data in the information structure is to use an array of pointers, where each pointer in the array points to the data for each selected region.

(2) When you wish to return information from a dying widget. If you want a widget program to return an item of information, then it must be passed in a variable which has global scope. A pointer is the most convenient way to pass this kind of information. The method is

- Create the information structure,
- Store the information structure using a pointer,
- Store the pointer in the user value of the widget top level base,
- Invoke XMANAGER to handle widget events with the CLEANUP keyword set to the name of the routine to be called when the top level widget dies,
- In the cleanup routine, save whatever information is required via the pointer,
- After XMANAGER is done, retrieve the information from the pointer.

Cheers,
Liam.

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