
Subject: Re: bytarr type conversion/structures
Posted by [davidf](#) on Sat, 26 Sep 1998 07:00:00 GMT
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Jacobus Koster (jkdj@ix.netcom.com) writes:

- > Here's one for the pro's (and DF :-), at least, I think, but I'm no
- > (big) expert.

Being separated from the "pro's" only serves to accentuate my decreasing stature as a programmer to be reckoned with. I am simply going to have to *stop* writing those damn FOR loops in example programs I publish on this newsgroup. :-(

- > Suppose my image files have a standard format with a standard 2048 byte
- > header.
- > This header consists of 10 bytes of extraneous information followed by a
- > descriptor part and a data part.
- > The descriptor part consists of about 100 descriptor fields, each of
- > which is a record/structure consisting of 3 short ints : key.type,
- > key.length, and key.offset.
- > [...]
- > I would like to read these headers as byte arrays of 2048 bytes, and
- > then forget forever about the file I got them from. From this byte
- > array, I want to read the 100 descriptor structures into a 100-element
- > structure array, with the structure elements described by :
- > {type:0,length:0,offset:0}. And then, I would like to access the actual
- > data itself, of course.

Does it strike you that forgetting "forever about the file" and accessing "the actual data itself" might be mutually exclusive goals in this case? :-)

- > Is it possible in IDL to do this kind of type conversion, WITHOUT first
- > writing the byte array out again into a dummy file and using an - albeit
- > very beautiful - ASSOC variable or something like that ?

No. Given the constraints you are putting on the problem (I suspect needlessly, but that is up to you to determine), I would say it is impossible to do this without writing a FOR loop (Oh boy!). What you want to do, it seems, is read a structure array from a byte array. You can certainly read integers or long integer, or even floats, from a byte array, but you can't read structures without doing it in some kind of loop.

- > All I know is : it should involve pointers (if only because the type of
- > the actual data varies). In addition to this, I would like to avoid
- > FOR-loops, and explicitly calculating integers as 256*byte1 + byte2

> strikes me as kinda crude.

I suspect, although I can't prove it, that your thinking about this problem is not crystal clear yet. Tell me again *why* you want to do this? And why you want to do it in this "throw it out" sort of way?

Cheers,

David

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