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Subject: Re: idlastro mrdfits and strings

Posted by [wlandsman](#) on Thu, 12 Nov 2009 17:40:04 GMT

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On Nov 11, 3:58 pm, Chris Thom <christ...@gmail.com> wrote:

- > I'm not sure if these tags are being padded in the write or the read
- > phase, but it'd be nice if there was a way to trim these tags on read.
- > Or is there some reason this is a bad idea?

The tags are being padded in the write. The problem is related to one I discussed earlier

[http://groups.google.com/group/comp.lang.idl-pvwave/browse\\_frm/thread/95e19b78119ab265/41b6775e8ae24ffe](http://groups.google.com/group/comp.lang.idl-pvwave/browse_frm/thread/95e19b78119ab265/41b6775e8ae24ffe)

where IDL does not include a terminating null byte for the string tags when writing a structure to disk. So to do this correctly, one has to convert the string tags in a structure to bytes, which means creating an entirely new structure (since one can't change data types of a structure element), greatly slowing things down and complicating the code. It is a fix that I should do sometime, but I am not in a hurry to do so. (But I will document this bug/feature better.)

- > The work-around (sprinkling `strtrim()`s throughout the code) is
- > functional if a little ugly.

If you are sure that you don't care about leading/trailing spaces, you could apply the following function right after the call to `mrdfits()`

```
function trimstruct,str
; Trim each string element of a structure, assume there are not
; substructures
N= N_tags(str)
for i=0,n-1 do $
    if size(str.(i),/tname) EQ 'STRING' then str.(i) = strtrim(str.(i),
2)
return
end
```

(Actually, it would be nice if one could apply `strtrim()` directly to a structure to do this.) --Wayne

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Subject: Re: idlastro mrdfits and strings

Posted by [Chris Thom](#) on Fri, 13 Nov 2009 01:58:15 GMT

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On Nov 12, 12:40 pm, wlandsman <wlands...@gmail.com> wrote:

> where IDL does not include a terminating null byte for the string tags  
> when writing a structure to disk. So to do this correctly, one has  
> to convert the string tags in a structure to bytes, which means  
> creating an entirely new structure (since one can't change data types  
> of a structure element), greatly slowing things down and complicating  
> the code. It is a fix that I should do sometime, but I am not in a  
> hurry to do so. (But I will document this bug/feature better.)

Ahh, I see. Thanks for the info. Seems like a strange interaction  
between the quirks of idl and the quirks of the FITS format.

> If you are sure that you don't care about leading/trailing spaces, you  
> could apply the following function right after the call to mrdfits()  
>  
> function trimstruct,str  
> ; Trim each string element of a structure, assume there are not  
> substructures  
> N= N\_tags(str)  
> for i=0,n-1 do \$  
> if size(str.(i),/tname) EQ 'STRING' then str.(i) = strtrim(str.(i),  
> 2)  
> return  
> end

HA! After I posted the first message, I wrote some code that is almost  
identical to this. Well, ok...mine was a little less elegant, but it's  
functionally identical.

> (Actually, it would be nice if one could apply strtrim() directly to a  
> structure to do this.) --Wayne

yup...I tried that too, just to see what would happen. :)

thanks  
chris

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