
Subject: Maddening structures

Posted by [Edd Edmondson](#) on Mon, 18 Sep 2006 11:47:23 GMT

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OK, I've got some data read in so that I have a structure that looks like

```
data.foo[600]
  .bar[600]
  .baz[600]
```

and I want
data[600].foo
 .bar
 .baz

In other words I want an array of structures rather than a structure of arrays.

Does anyone have any magic that works for the case when foo, bar and baz are not previously known?

--
Edd

Subject: Re: Maddening structures

Posted by [JD Smith](#) on Tue, 19 Sep 2006 18:04:23 GMT

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On Mon, 18 Sep 2006 11:47:23 +0000, Edd wrote:

```
> OK, I've got some data read in so that I have a structure that looks
> like
>
> data.foo[600]
>   .bar[600]
>   .baz[600]
>
> and I want
> data[600].foo
>   .bar
>   .baz
>
> In other words I want an array of structures rather than a structure
> of arrays.
>
> Does anyone have any magic that works for the case when foo, bar and
```

> baz are not previously known?

Read in the field names (from your file) into a string array "fields", and the first set of values into a pointer array "vals", and then create an array of structures like this:

```
st=create_struct(fields[0],*vals[0])
for i=1,nfields-1 do $
    st=create_struct(st,fields[i],*vals[i])
st=replicate(st,ndata)
```

If your file format describes the type of each field (float, int, string, etc.), you can parse that and make an appropriate vals pointer array from it, rather than divining it from the data themselves (which is more likely to give trouble).

JD

Subject: Re: Maddening structures

Posted by [Edd Edmondson](#) on Wed, 20 Sep 2006 09:55:12 GMT

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JD Smith <jdsmith@as.arizona.edu> wrote:

```
> st=create_struct(fields[0],*vals[0])
> for i=1,nfields-1 do $
>     st=create_struct(st,fields[i],*vals[i])
> st=replicate(st,ndata)
```

That loop is particularly cunning. Thank you!

--

Edd
