
Subject: Renaming tags in an array of structures

Posted by [Michael Williams](#) on Thu, 16 Sep 2010 18:28:43 GMT

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I have an array of structures:

```
IDL> x = {a: 1, b:2, c: indgen(5)}  
IDL> xx = replicate(x, 10)
```

In this case, I want to rename the 'b' tag to 'foo' and the 'c' tag to bar. But I want a function that works for arbitrary tag names. I have read http://www.dfanning.com/code_tips/addfield.html, which describes how to add a field to an array of structures using struct_assign. So far I have the following function, which seems like it's headed in the right direction: it will add the foo and bar tags. But (i) it only works if you're renaming exactly two tags because of the create_struct call (ii) it doesn't copy the data in the old tags to the new tags and (iii) it doesn't delete the old tags, which is necessary for true "replacement".

Can anyone see how to fix these problems so that the function works for arbitrarily many tag names, copies the data (ideally without using execute statements, which is the only way I can think of doing it), and the old fields are deleted? Or is there another solution altogether?

```
function add_field_array_str, str, old_tags, new_tags  
  template = create_struct(new_tags, 0., 0., str[0])  
  newstr = replicate(template, n_elements(str))  
  struct_assign, str, newstr  
  
  ; Copy the contents of "str.old_tags" to "newstr.new_tags" ... ?  
  ; Delete "newstr.old_tags" ... ?  
  
  return, newstr  
end
```

```
IDL> xx2 = add_field_array_str(xx, ['foo', 'bar'])  
IDL> help, xx2, /struct  
** Structure <1a17494>, 5 tags, length=24, data length=22, refs=1:  
FOO      FLOAT      0.00000  
BAR      FLOAT      0.00000  
A        INT        1  
B        INT        2  
C        INT        Array[5]
```
