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Subject: Re: Removing fields from a structure

Posted by [Brian Larsen](#) on Thu, 01 Feb 2007 17:31:32 GMT

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I don't know that it is more elegant but it is built into solarsoft as  
rem\_tag.pro

```
[larsen@titan]~> cat /usr/local/ssw/gen/idl/struct/rem_tag.pro
;+
; Project    : HESSI
;
; Name       : REM_TAG
;
; Purpose    : remove tags from a structure
;
; Syntax     : NEW_STRUCT=REM_TAG(STRUCT,TAG)
;
; Inputs     : STRUCT = input structure (array or scalar)
;               : TAG = array of tag names or indexes to remove
;
; Outputs    : NEW_STRUCT = new structure
;
; Keywords   : NAME = new name for structure (use with care)
;
; Category   : Structure handling
;
; Written    : 1-Dec-02, Zarro (EER/GSFC)
;
; Modified   : 24-Dec-04, Zarro (L-3Com/GSFC)
;               - vectorized, and removed dangerous /free_mem
;               01-Feb-05, Csillaghy (Univ. Applied Sciences NW
Switzerland)
;               - changed n_elements( struct ) to size(struct /dim ),
see at the end.
;-
;

function
rem_tag,struct,tags,_extra=extra,quiet=quiet,err=err,name=na me

verbose=1-keyword_set(quiet)

-- bypass for older IDL versions

forward_function rem_tag2

if (1-since_version('5.4')) then begin
  if have_proc('rem_tag2') then $
    return,rem_tag2(struct,tags,_extra=extra,name=name,err=err)
```

```

message,'no longer supported for this version of IDL - '+!
version.release,/cont
if exist(struct) then return,struct else return,-1
endif

-- catch errors

err=""
error=0
catch,error
if error ne 0 then begin
  err=err_state()
if verbose then message,err,/cont
catch,/cancel
if exist(struct) then return,struct else return,-1
endif

if (1-is_struct(struct)) then begin
  err='invalid input'
pr_syntax,'new_struct=rem_tag(struct,tag_name)'
if exist(struct) then return,struct else return,-1
endif

sz=size(tags,/type)
index_input=(sz gt 1) and (sz lt 6)
string_input=(sz eq 7)
err='input tag names or tag indexes required'
if (not index_input) and (not string_input) then begin
  if verbose then message,err,/cont & return,struct
endif
if string_input and is_blank(tags) then begin
  if verbose then message,err,/cont & return,struct
endif

-- create structure template with tags removed

err=""
stag_names=tag_names(struct)
ntags=n_elements(stag_names) & stag_index=lindgen(ntags)
for i=0,ntags-1 do begin
  if string_input then chk=where(strup(tags) eq stag_names[i],count)
  else $
    chk=where(long(tags) eq stag_index[i],count)
  if count eq 0 then begin
    if is_struct(temp) then $
      temp=create_struct(temp,stag_names[i],struct[0].(i)) else $
        temp=create_struct(stag_names[i],struct[0].(i))
  endif

```

```

endfor

;-- all tags removed

if not is_struct(temp) then return,-1

;-- no tags removed

rtags=tag_names(temp)
if n_elements(rtags) eq ntags then return,struct

;-- rename if requested

if is_string(name) then temp=create_struct(temp,name=strup(name))

dims_arr =size(struct, /dim)
if total(dims_arr) GT 1 then $
  temp=replicate2(temporary(temp),dims_arr)

struct_assign,struct,temp,/nozero

return,temp

end

```

Brian

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On Feb 1, 10:27 am, "M. Katz" <MKatz...@yahoo.com> wrote:

- > I was wondering if there's a simple way to remove a field from a
- > structure?
- >
- > I can envision a manual way:
- > 0) creating a new structure variable for the result
- > 1) reading the original's tag names
- > 2) stepping through tag by tag using indexed value references, like a.
- > (i)
- > 3) using create\_struct() to put the tags and values into the new

> structure, one by one, except for the tag(s) we're removing.

>

> Does anyone have a more elegant suggestion?

> M. Katz

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