
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_STRUCTURE=REM_TAG(STRUCT,TAG)
;
; Inputs    : STRUCT = input structure (array or scalar)
;            : TAG = array of tag names or indexes to remove
;
; Outputs   : NEW_STRUCTURE = 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
    endif
endfor

```

```

endifor

;-- 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

 Brian A. Larsen
 Dept. of Physics
 Space Science and Engineering Lab (SSEL)
 Montana State University - Bozeman
 Bozeman, MT 59717

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
-