
Subject: Extract a sub-structure from a structure
Posted by [L. Testut](#) on Thu, 26 Jan 2006 15:29:36 GMT
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```
; Dear all,  
; I have a big structure st={lat:FLTARR(N), lon:FLTARR(N),  
para1:FLTARR(N),..., paraN:INTARR(N)} with many parameters  
; Lat and lon represent coordinates of an altimetric point above the  
sea surface and concern let's the entire globe.  
; What I want to do is to extract a sub-region from this struture, I've  
seen that there is at least two solutions :  
; 1) I create a new structure of the new size  
; 2) or I use pointer to change the size of my field whitout defining a  
new structure  
;  
;  
;  
; I prefer the second solution but I only manage to do the first one  
!!!
```

```
*****SOLUTION 1*****  
; I define stn "normal" structure  
stn = {x:findgen(100),y:findgen(100),z:(indgen(100)+500.),  
para1:LONARR(100), para2:INTARR(100)}  
help,stn,/str
```

```
; I select a sub-region of interest  
IDN = WHERE((stn.x LT 50) AND (stn.y LT 50),count)  
print,count  
plot,stn.x[ID],stn.y[ID]
```

```
; Now if I want to work with a struture representative of the  
sub-region which is smaller  
; and needs less computing time I have to do some contorsions like :  
tag = tag_names(stn)  
NewStn = CREATE_STRUCT(tag[0], FINDGEN(count))  
FOR i=1,N_ELEMENTS(tag)-1 DO NewStn=CREATE_STRUCT(NewStn, tag[i],  
FINDGEN(count))  
  
help,NewStn,/str
```

```
; ! It seems to be OK ! (unless the field type have changed ! ) Now I  
tried the second solution
```

```
*****SOLUTION 2*****  
; I define stp "pointer" struture  
  
stp =  
{x:ptr_new(findgen(100)),y:ptr_new(findgen(100)),z:ptr_new(( indgen(100)+500.)),
```

```
para1:ptr_new(LONARR(100)), para2:ptr_new(INTARR(100))}
```

```
help,stp, /str
```

```
; I select a sub-region of interest
```

```
IDP = WHERE((*stp.x LT 50) AND (*stp.y LT 50),count)
```

```
print,count
```

```
; it works ok until now
```

```
; Then as I am very optimistic I want to do that:
```

```
tag = tag_names(stp)
```

```
FOR i=1,N_ELEMENTS(tag)-1 DO *stp.(i)=*stp.(i)[IDP]
```

```
;but it doesnt' work ? is there somebody that can tell me what is the
```

```
;right way to replace in my structure the total region with the
```

```
;sub-region for all the parameter of course !
```

```
; Thanks a lot !
```

```
; Laurent
```
