Subject: Function referencing/automatic defintion question.
Posted by Paul Van Delst[1] on Thu, 29 May 2003 15:00:43 GMT
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Hello,

IDL> print, !version
{ x86 linux unix linux 5.5a Feb 7 2002   32   32}

I have a file called emiscoeff__define.pro that contains the named structure (EmisCoeff) definition. **Preceding** the actual definition procedure in the same source file is a bunch of utility functions that allow me to allocate, assign, and destroy the structure. I invoke the automatic definition thusly:

```
  EmisCoeff = { EmisCoeff }
```

which produces the message:

% Compiled module: EMISCOEFF__DEFINE.

Fair enough. The very next statement in my code calls a function in the emiscoeff__define.pro file that allocates space in the structure:

```
  Result = Allocate_EmisCoeff( n_Wind_Speeds, $
                               n_Coefficients, $
                               n_Channels, $
                               EmisCoeff )
  IF ( Result NE SUCCESS ) THEN $
    MESSAGE, 'Error allocating EmisCoeff structure', $
             /NONAME, /NOPRINT
```

When this statement os reached I get the message:

% COMPUTE_THETA_COEFFICIENTS: Variable is undefined: ALLOCATE_EMISCOEFF.

where "Compute_Theta_Coefficients" is the name of my calling function.

If I then do a "help":

```
IDL> help
% At $MAIN$
EMISCOEFF       STRUCT    = -> EMISCOEFF Array[1]
Compiled Procedures:
   $MAIN$  COUNT_EMISCOEFF_SENSORS EMISCOEFF__DEFINE
PLOT_EMISSIVITY_FIT_RESIDUALS
   THETA_FUNCTION

Compiled Functions:
```

ALLOCATE_EMISCOEFF ASSIGN_EMISCOEFF
ASSOCIATED_EMISCOEFF CHECK_VECTORS
COMPUTE_EMISSIVITY_COEFFICIENTS COMPUTE_EMISSIVITY_FIT
COMPUTE_THETA_COEFFICIENTS
CONVERT_STRING DESTROY_EMISCOEFF IS_NCDF READ_NCDF
VALID_STRING

You can see that the function ALLOCATE_EMISCOEFF is in the list of compiled functions.

So my question is: what's the go here? Why doesn't my calling procedure "see" the compiled functions that precede my structure definition? I thought the whole point of sticking these routines *before* the procedure in my emiscoeff__define.pro file that actually does the definition meant that they would be compiled?

Any insights appreciated,

paulv

p.s. When I manually compile the emiscoeff__define.pro file I get the following:

IDL> .run emiscoeff__define
% Compiled module: ASSOCIATED_EMISCOEFF.
% Compiled module: DESTROY_EMISCOEFF.
% Compiled module: ALLOCATE_EMISCOEFF.
% Compiled module: ASSIGN_EMISCOEFF.
% Compiled module: COUNT_EMISCOEFF_SENSORS.
% Compiled module: EMISCOEFF__DEFINE.

How come I don't get this list when I do the automatic compilation via

EmisCoeff = { EmisCoeff }

???

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