Subject: Strange bug in IDL or AIX
Posted by dov on Mon, 03 Feb 1992 10:10:14 GMT
View Forum Message <> Reply to Message

I have encountered a very strange bug. I don't know if it belongs
to IDL or AIX. It occurs when I use call_external from IDL.

Here is my idl program bug.pro:

```
--
1: a=call_external('./bug', ' ')
2:
3: end
--
```

And here is my external routine bug.c:

```
--
 1: #include <math.h>
 2:
 3: bugsub(double *r)
 4: {
 5:    *r= sqrt(5.0);
 6: }
 7:
 8: bug(int argc, void *argv[])
 9: {
10: }
--
```

I compile and link the c program with the sequence of commands

```
  cc -O -c bug.c
  ld -e bug -o bug bug.o -lm -lc
```

and then I try to run the program from idl. Here a copy of
idl's output:

```
  IDL> .run bug
  % Compiled module: $MAIN$.
  % CALL_EXTERNAL: Error loading sharable executable.
                  Symbol: <not relevant>, File = ./bug

    Exec format error
  % Execution halted at $MAIN$ <bug2.pro(   1)>  (CALL_EXTERNAL).
  IDL>
```

But here comes the strange part. There are several ways this bug can

dissappear. If I change line 5 of bug.c to read:

5: *r=sin(5.0);

the bug dissappears!

The output from idl follows:

```
 IDL> .run bug
 % Compiled module: $MAIN$.
 IDL>
```

Or if line 3 and 5 are changed to

```
3:  bugsub(double r)
5:    r=sqrt(5.0)
```

the bug also doesn't appear.

Neither does it appear if line 3 and 4 are changed to (the only
workaround of the bug that I have found...)

```
3: bugsub(double *rr)
4: { double *r;  r=rr;
```

Does anybody have any idea what is going on here? Where is the bug?
Why is there a difference between sqrt() and sin()?

--

Dov Grobgeld
The Weizmann Institute of Science, Israel
"Where the tree of wisdom carries oranges"