Subject: DLM on 64 bit machine
Posted by Ed Wright on Wed, 27 Apr 2005 14:40:22 GMT
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To: IDL
From: Ed Wright

Last year, I finished a large DLM interface to the JPL/NAIF CSPICE library. The DLM functions on four platforms (Sun, OSX, XP, Linux) under five different compilers.

Last week I attempted to use it on 64bit Solaris compiled with gcc 3.3x. - which failed (not a surprise). The code needs modification to run 64bit clean.

I discovered one problem due to the failure to return ints/longs from the DLM to IDL.

Note the following code, 'found' typedefs to an int (used as a boolean), 'n' also typedefs to an int:

```
PROCEDURE CSPICE_DTPOOL(int Argc, IDL_VPTR Argv_orig[], char *Argk)

  {
  SpiceBoolean          found;
  SpiceInt              n;

  IDL_ALLTYPES          f;
  IDL_ALLTYPES          g;

  ...

  f.c = (UCHAR) found;
  IDL_StoreScalar( Argv_orig[1], IDL_TYP_BYTE, (IDL_ALLTYPES*) &f );

  g.l = (IDL_LONG)n;
  IDL_StoreScalar( Argv_orig[2], IDL_TYP_LONG, (IDL_ALLTYPES*) &n );


  ...
  }
```

This code works. Pass 'found' via the ALLTYPES union, pass '&n' directly.

My question, if I use the 'g' union in the second IDL_StoreScalar call rather than the ref to 'n', the value 'n' does not return to IDL. Conversley if I use the ref to 'found' in the first IDL_StoreScalar, 'found' does not return. Can someone explain why? I think I missed

something fundamental.

As always,
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