
Subject: Calling Matlab engine from IDL,
Posted by [Lars G. Hanson](#) on Wed, 24 Mar 2004 17:21:18 GMT
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In order to make use of a library of Matlab-functions from IDL, I attempted to use freely available software located at <http://hendrix.imm.dtu.dk/software/atlant/atlant.html> for spawning a matlab engine by call_external (interface written by Finn Aarup Nielsen and Peter Toft).

After minor adoptions to matlab 6.5 (given below), Finns and Peters code works very nicely UNTIL the first IDL graph is plotted. After that it seems impossible to get data back from Matlab via call_external. If IDL graphics has been used at any time in an IDL session, it is impossible to get the matlab session running at all.

Until now, I would have thought that call_external and graphics were independent, but no. I'm running Matlab IDL 5.4, Matlab 6.5, Redhat 9. Even though Finn and Peter wrote the code for earlier versions of IDL and Matlab, they experienced the same problem (SGI platform).

Any ideas on cause or solution?

Cheers,
Lars, larsh@drcmr.dk

Below were the changes needed to make idl2mat work

diff idl2mat.c idl2mat.c.orig

```
159,160c159,160
< // if (debug) printf("%s (Matlabput) Setting name: %s\n", filename, pString);
< // mxSetName(pMat, pString); Obsolete.
---
> if (debug) printf("%s (Matlabput) Setting name: %s\n", filename, pString);
> mxSetName(pMat, pString);
163,164c163
< // engPutArray(ep, pMat); //Obsolete.
< engPutVariable(ep, pString, pMat);
---
> engPutArray(ep, pMat);
224,225c223
< // if (!(pMat = engGetArray(ep, pString))) { //Obsolete.
< if (!(pMat = engGetVariable(ep, pString))) {
---
> if (!(pMat = engGetArray(ep, pString))) {
276,277c274
< // pMat = engGetArray(ep, pString); //Obsolete.
```

```

< pMat = engGetVariable(ep, pString);
---
> pMat = engGetArray(ep, pString);
325,327d321
< if (debug) printf("(Matlabeval) Evaluating string: %s\n", pString);
<
< engOutputBuffer(ep, NULL, 0); //Disable output to avoid segmentation error.

```

diff Makefile Makefile.orig

```

< #ARCH = lnx86
< ARCH = glnx86
---
32,36c30
< # -lmi removed.
< LFLAGS = -lm -shared -L$(MATLAB)/extern/lib/$(ARCH) -leng -lmx -lmat -lut
<
< #From idl_5.4/external/call_external/C/callext_unix.txt:
< FFLAGS = -fPIC
---
> LFLAGS = -lm -shared -L$(MATLAB)/extern/lib/$(ARCH) -leng -lmx -lmat -lmi -lut
41c35
< $(CC) -o $(EXE) $(OBJS) $(LFLAGS) $(FFLAGS)
---
> $(CC) -o $(EXE) $(OBJS) $(LFLAGS)

```
