JPL Spice on my Mac

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I put all the spice stuff in a directory in my home folder called "naif", so its full path is the "~/lib/naif". The C and Fortran toolkit can be downloaded from JPL's Spice Toolkit webpage (http://naif.jpl.nasa.gov/naif/toolkit.html).

1 Fortran

1.1 Basic install

1. Download the Fortran toolkit for gfortran 64bit, need files "toolkit.tar.Z" and "importSpice.csh", and put them in the "~/lib/naif" directory.
2. From the terminal, cd into the "~/naif" directory, and run:

   ```
   /bin/csh importSpice.csh
   ```

   This will extract all the files into a new folder "toolkit".

1.2 Recompile with local gfortran

Just to make sure the toolkit is compatible with the code I write, I recompile the code.

1. cd into "toolkit"
2. enter:

   ```
   /bin/csh makeall.csh
   ```

   Let it do its work.

1.3 Linking to Library

describe how to correctly link to library using gfortran.

2 C

2.1 Basic install

1. Download the C toolkit for "Mac/Intel, OSX, Apple C, 64bit", need files "cspice.tar.Z" and "importCSpice.csh", and put them in the "∼/lib/naif" directory.

2. From the terminal, cd into the "∼/lib/naif" directory, and run

   ```
   /bin/csh importCSpice.csh
   ```

   This will extract all the files into a new folder "cspice".

2.2 Recompile with local gcc

Just to make sure the toolkit is compatible with the code I write, I recompile the code.

1. cd into "cspice"

2. Instead of using Apples C compiler (cc), we want our gcc version. To trigger this in the provided script we need to set the environmental variable "TKCOMPILER":

   ```
   export TKCOMPILER="gcc"
   ```

3. enter:

   ```
   /bin/csh makeall.csh
   ```

   Let it do its work.

2.3 Linking to Library

describe how to correctly link to library using gcc.

3 Python

The most complete Python implementation/wrapper of Spice is SpiceyPy, available via github. I used a combination of Macports and Pip to install all the requirements, obtained SpiceyPy using git, and did a manual install using the –user option. In this installation it does download its own copy of CSpice, but who cares about hard-drive space at this point.