Navigation and Ancillary Information Facility
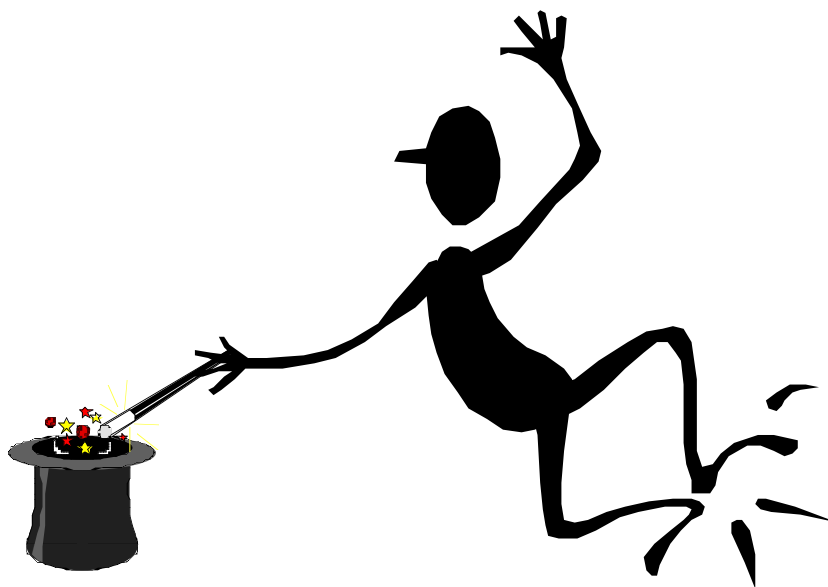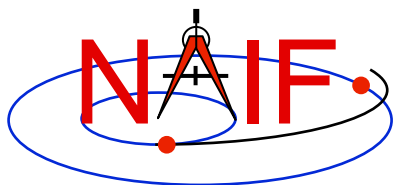
Getting and Installing
the SPICE Toolkit

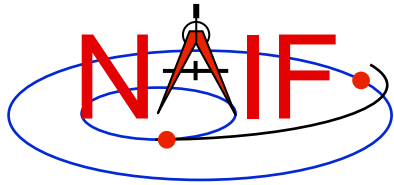**January 2012**

Getting Toolkit

- **All instances of the SPICE Toolkit are available 24x7 from the NAIF WWW server**

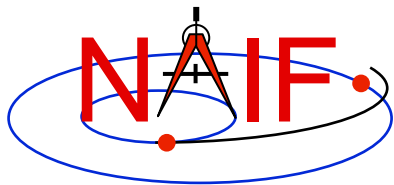 **http://naif.jpl.nasa.gov/naif/toolkit.html**

- **No password or identification is needed**

- **To download a Toolkit package**
  - **Select language – FORTRAN, C, IDL, or MATLAB**
  - **Select computer platform/OS/compiler combination**
  - **Download all toolkit package components**
    - » **package file – toolkit.tar.Z (or toolkit.exe),**

      cspice.tar.Z (or cspice.exe),

      icy.tar.Z (or icy.exe), or

      mice.tar.Z (or mice.exe)
    - » **Installation script (if present) – import*.csh**
    - » **Accompanying documents - README, dscriptn.txt, whats,new**

Don't Port it Yourself

- **The packages provided on the NAIF server have been built and tested by NAIF on these particular environments.**

- **We highly recommend you NOT try to port any instance of the Toolkit to some other environment, especially without consulting with NAIF first.**
  - There are portability issues and compiler optimization issues that must be carefully dealt with.

Installing Toolkit
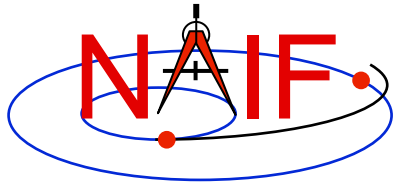

Terminal Window

- **To install the Toolkit, follow the directions given in the README. Normally this consists of the following (not applicable for PC Windows):**

```
prompt> chmod u+x importSpice.csh
prompt> ./importSpice.csh
prompt> rm toolkit.tar
```

- **For PC Windows, execute the toolkit.exe application (or cspice or icy or mice) to expand the archive.**
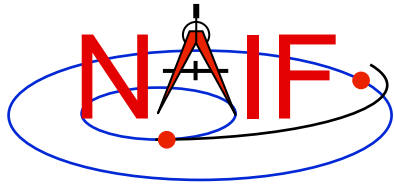
```
> toolkit
```

- **You now have the expanded toolkit (or cspice or icy or mice) package.**

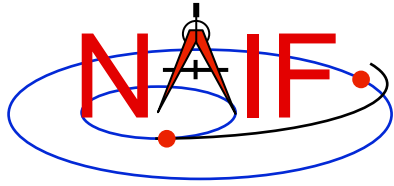# Configuring Your Computer

- **For some programming environments there are required additional steps to prepare for programming using SPICE.**

- **For some programming environments there are recommended additional steps to make program development easier.**

- **Read the "Preparing for Programming" tutorial and the "README" file found in the Toolkit download directory for more information!**
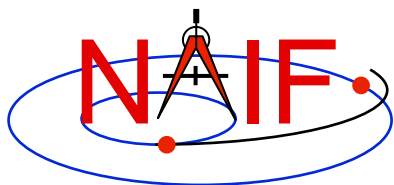
Checking It Out

- **Try some executables**
  - Use *tobin* to convert the SPICE transfer format SPK and CK files supplied with the Toolkit to local binary.
    - » cook_01.tsp, cook_02.tsp, cook_01.tc, and cook_02.tc are found in the ../data directory
  - Use *brief*, *ckbrief* or *spacit* to summarize the converted kernels.

- **Problems may occur if operating systems or compiler versions are out of sync**
  - Rebuild the Toolkit using the script "makeall.csh" (or "makeall.bat") located in the "top level" directory (toolkit or cspice or icy or mice).

- **In the rare circumstance that things still don't work, contact your System Administrator or NAIF.**

Backup

- **Getting the Toolkit using command line FTP**

Navigation and Ancillary Information Facility

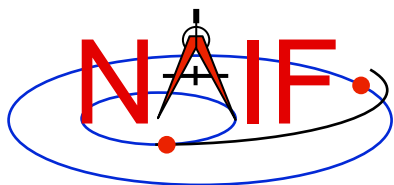```
Terminal Window   ☒

prompt> ftp naif.jpl.nasa.gov

Connected to naif.jpl.nasa.gov
220 Welcome to the NAIF FTP service.

Name (your.sight:your_name): anonymous
331 Please specify the password
Password: your@e.mail.address
230-
230-   ===
230- | Jet Propulsion Laboratory |
230- | * * *   W A R N I N G   * * * |
230- | Property of the |
230- | UNITED STATES GOVERNMENT |
230-   ===
230-
230 Login successful. Have fun.
Remote system type is UNIX.
Using binary mode to transfer files.

ftp> cd pub/naif/toolkit/<FORTRAN or C or IDL or MATLAB>
250 CWD command successful.
ftp> dir
```
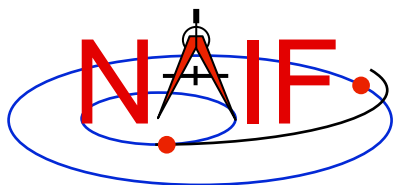
**Navigation and Ancillary Information Facility**

```
                  Terminal Window                                                          ⊠

ftp> dir                    ftp> dir                    ftp> dir                    ftp> dir
Mac_OSX_Absoft              Mac_OSX_Apple_C             Mac_OSX_Apple_C             Mac_OSX_Apple_C
Mac_OSX_IFORT              Mac_OSX_Intel_C             Mac_OSX_Intel_C             Mac_OSX_Intel_C
Mac_OSX_g77                PC_Cygwin_C                 PC_Linux_C                  PC_Linux_C
PC_Cygwin                  PC_Linux_C                  PC_Windows_Visual_C         PC_Windows_Visual_C
PC_Linux                   PC_Linux_C_64bit            Sun_Solaris_C
PC_Windows_Digital         PC_Windows_Visual_C         Sun_Solaris_GCC
PC_Windows_IFORT           Sun_Solaris_C
PC_Windows_Lahey           Sun_Solaris_GCC
Sun_Solaris                Sun_Solaris_GCC_64bit
```

The environments available at the time you download
the Toolkit may differ from those shown here.

FORTRAN   C   IDL   MATLAB

Command line FTP - 3

Navigation and Ancillary Information Facility

```
Terminal Window

ftp> cd <environment>/packages
ftp> binary
200 Type set to I
ftp> get toolkit.tar.Z
        ( or toolkit.exe
          or cspice.tar.Z or cspice.exe
          or icy.tar.Z or icy.exe
          or mice.tar.Z or mice.exe )
. . .
ftp> ascii
200 Type set to A
ftp> get importSpice.csh
        ( or importCSpice.csh
          or importIcy.csh
          or importMice.csh )
        ( not availabe for Windows environment )
ftp> get README
ftp> get dscriptn.txt
ftp> get whats.new
ftp> quit
```