

# Proposal to create a new external Package

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Nov. 16<sup>th</sup> 2004

# Current Status

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- ❑ Some packages contain large files that change relatively infrequently.
- ❑ These files are sometimes duplicated in multiple packages.
- ❑ An example is the JPL Ephemeris file `de405.fits` which takes 9 MB of space and can be found in `astro` and `glbary`.
- ❑ The timescale for these files changing are on the scale of ROOT version changes for ROOT files or almost never for the case of JPL Ephemeris files.

# Solution

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- ❑ Create a new external interface class that sets an environment variable that points to a storage directory which contains these infrequently changed files.
- ❑ The files stored should only be those which change on a longer or equal timescale to external package changes.
- ❑ Automatically tied in with the installer to minimize interaction required by end user.

# Example

The JPL Ephemeris files are moved into the extFiles class.

Sample requirements file

```
package extFiles
version v0r1
author Theodore Hierath <hierath@u.washington.edu>
macro extFiles_DIR "${GLAST_EXT}/extFiles" WIN32
    "%GLAST_EXT%\extFiles"
include_path none
macro extFiles_native_version "v0r1"
macro extFiles_PATH
    "${extFiles_DIR}/${extFiles_native_version}" \
    WIN32    "${extFiles_DIR}\${extFiles_native_version}"
set  EXTFILESSYS    "${extFiles_PATH}"
```

Call from inside a program

```
const char* extfiles_root = ::getenv("EXTFILESSYS");
sprintf(fileName, "%s/%s/%s", extfiles_root, "jplephem",
    "de405.fits");
fits_open_file(&FF, fileName, READONLY, &error);
```

