Transitioning from the NCAR Mass Store (MSS) to the High Performance Storage System (HPSS)

With implications for the TIEGCM model and developers

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HPSS basics

- CISL docs: http://www2.cisl.ucar.edu/docs/hpss
- Reference and User's Guide: Gleicher Enterprises
- The user interface to the HPSS is the Hierarchical Storage Interface (HSI), an ftp-like unix-style command interface.
- HSI commands can be executed from the unix command line (or from a shell script):
  - hao> *hsi ls –l*
- HSI commands can be executed from an HSI session:
  - hao> *hsi*
  - [HSI]/home/foster-> *ls –l*
  - [HSI]/home/foster-> *cd dir1/dir2*
  - [HSI]/home/foster-> *pwd*
- HSI can execute commands from an input script:
  - hao> *hsi in file.hsi*

Some basic useful hsi commands:

- Print a 1-page summary of hsi commands:
  hsi help

- Print a long listing of a directory tree under my hpss home (-R is recursive, -A prints annotation):
  hsi ls –lRA /home/bozo/tiegcm_hpss

- Put local file on the hpss (*put local_file : hpss_file*):
  hsi put diskfile.nc : /home/bozo/dir1/hpssfile.nc

- Get a file from the hpss (*get local_file : hpss_file*):
  hsi get diskfile.nc : /home/bozo/dir1/hpssfile.nc

- Remove a file from the hpss (escape tilde home):
  hsi rm \~/dir1/hpssfile.nc

TIEGCM SVN branch to handle mss to hpss transition:

- An SVN branch has been created, and will be maintained until after the CISL switch-over in late March, when it will be merged back to the trunk:
  $SVN/tiegcm/branches/tiegcm_hpss
- Changes in tiegcm_hpss:
  - All references to the mss have been removed.
  - The dispose.csh script now contains hsi put and annotate commands, and is named dispose_xxxxxx.hsi (where xxxxxx is a unique pid, see dispose.F module)
  - The DISPOSE namelist parameter is deprecated.
  - A new namelist parameter HPSS_PATH has been added (this will NOT be in the Community release namelist input file).
  - SOURCE and OUTPUT namelist files must be available as relative or absolute paths on the local file system (mss-style paths are no longer allowed)

To checkout tiegcm_hpss and make a default test run:

- svn checkout $SVN/tiegcm/branches/tiegcm_hpss

- cp tiegcm_hpss/scripts/tiegcm-linux.job .

- tiegcm-linux.job &

- After the job has run, cd to the exec directory, examine and optionally execute the dispose_xxxxx.hsi script.

- Experiment with the HPSS_PATH namelist.

- Please give me feedback and suggestions.