



Removing unused source code files

Tuesday, May 23, 2023

4:16 PM

I renamed `~/code/sublimed1dc_profile/output/hcn.pop` to `~/code/sublimed1dc_profile/output/hcn_compareto.pop` so I can compare the output after I make changes and confirm that the changes I make don't affect the output.

Do not remove `reduceTol()` and the `readCKC` related functions

Remove code in increments and test:

I removed:

- `src/grid_old.c`
- `src/gridconvert`
- `src/py_main`
- `src/py_messages`
- `src/py_models`
- `src/py_utils`
- `src/tree_random`

→ Confirmed no change in output

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- `'src/grid2fits.c'`
- `'src/gridio.c'`
- `'src/popsin.c'`
- `'src/predefgrid.c'`
- `'src/raythrucells.c'`
- `'src/smooth.c'`
- `'src/tcpsocket.c'`

☐ Received compile errors until I added each file back in

ld: file not found: src/grid2fits.o
ld: file not found: src/gridio.o
ld: file not found: src/popsin.o
ld: file not found: src/predefgrid.o

ld: file not found: src/raythrucells.o
ld: file not found: src/smooth.o
ld: file not found: src/tcpsocket.o

❑ Confirmed no change to output.

► I think this means that they are on a list of items to be compiled, but are never used. After a grep, I found them in Makefile.srcs

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'grid2fits' *
Makefile.srcs:      src/grid2fits.c\
Makefile.srcs:      src/grid2fits.c\
Makefile.srcs:      src/grid2fits.h\
Makefile.srcs:      src/grid2fits.h\
```

► I am going to try commenting out, but not deleting the .c and .h files listed above and see if it changes the code before I remove them

○ Grid2fits

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
    _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
    _default_density in defaults.o
    _default_temperature in defaults.o
    _default_abundance in defaults.o
    _default_molNumDensity in defaults.o
    _default_doppler in defaults.o
    _default_velocity in defaults.o
    _default_magfield in defaults.o
  ...
  "_run", referenced from:
    _main in main.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1
```

○ Gridio

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
    _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
    _default_density in defaults.o
    _default_temperature in defaults.o
    _default_abundance in defaults.o
    _default_molNumDensity in defaults.o
    _default_doppler in defaults.o
    _default_velocity in defaults.o
    _default_magfield in defaults.o
  ...
  "_fixRandomSeeds", referenced from:
    _readOrBuildGrid in grid.o
  "_freeGridInfo", referenced from:
    _readGridWrapper in grid.o
  "_freeKeywords", referenced from:
    _readGridWrapper in grid.o
  "_initializeKeyword", referenced from:
    _readGridWrapper in grid.o
  "_mallocAndSetDefaultGrid", referenced from:
    _readGridExtFromFITS in grid2fits.o
    _readOrBuildGrid in grid.o
  "_readGrid", referenced from:
    _readGridWrapper in grid.o
    (maybe you meant: _readGridWrapper, _readGridExtFromFITS )
  "_run", referenced from:
    _main in main.o
  "_writeGridToFITS", referenced from:
```

```

    "_writeGridIsRequired", referenced from:
        _readOrBuildGrid in grid.o
    "_write_VTK_unstructured_Points", referenced from:
        _dumpGrid in grid.o
        _readOrBuildGrid in grid.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1

```

○ Popsin

```

(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
      _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
      _default_density in defaults.o
      _default_temperature in defaults.o
      _default_abundance in defaults.o
      _default_molNumDensity in defaults.o
      _default_doppler in defaults.o
      _default_velocity in defaults.o
      _default_magfield in defaults.o
  ...
  "_fixRandomSeeds", referenced from:
      _readOrBuildGrid in grid.o
  "_run", referenced from:
      _main in main.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1

```

○ Predefgrid

```

(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
      _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
      _default_density in defaults.o
      _default_temperature in defaults.o
      _default_abundance in defaults.o
      _default_molNumDensity in defaults.o
      _default_doppler in defaults.o
      _default_velocity in defaults.o
      _default_magfield in defaults.o
  ...
  "_fixRandomSeeds", referenced from:
      _readOrBuildGrid in grid.o
  "_run", referenced from:
      _main in main.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1

```

○ Raythrucells

```

(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
      _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
      _default_density in defaults.o
      _default_temperature in defaults.o
      _default_abundance in defaults.o
      _default_molNumDensity in defaults.o
      _default_doppler in defaults.o
      _default_velocity in defaults.o
      _default_magfield in defaults.o
  ...
  "_fixRandomSeeds", referenced from:
      _readOrBuildGrid in grid.o
      _predefinedGrid in predefgrid.o
  "_run", referenced from:

```

```
_run, referenced from:
  _main in main.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1
```

○ Smooth

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_levelPops", referenced from:
    _run in run.o
  "_openSocket", referenced from:
    _parseInput in run.o
  "_sourceFunc_cont", referenced from:
    _traceray in raytrace.o
  "_sourceFunc_line", referenced from:
    _traceray in raytrace.o
  "_writeFitsAllUnits", referenced from:
    _run in run.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1
```

○ Tcpsocket

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_openSocket", referenced from:
    _parseInput in run.o
  "_writeFitsAllUnits", referenced from:
    _run in run.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1
```

- Confirmed no change in output after uncommenting everything

I am thinking that these source files define some of the unused functions, so I am going to start removing the functions, and later return to see if I can remove some of these files.

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I have now removed all references to functions in ['src/grid2fits.c'](#) and ['src/gridio.c'](#) so I should be able to remove them from the code/

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'grid2fits' *
Makefile.srcs:      src/grid2fits.c\
Makefile.srcs:      src/grid2fits.c\
Makefile.srcs:      src/grid2fits.h\
Makefile.srcs:      src/grid2fits.h\
...
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'grid2fits' src/*
src/grid2fits.c: *  grid2fits.c
Binary file src/grid2fits.gcno matches
src/grid2fits.h: *  grid2fits.h
src/gridio.h:  #include "grid2fits.h"

(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'gridio' *
Makefile.srcs:      src/gridio.c\
Makefile.srcs:      src/gridio.c\
Makefile.srcs:      src/gridio.h\
Makefile.srcs:      src/gridio.h\
...
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'gridio' src/*
src/grid.c:#include "gridio.h"
src/arid2fits.c:#include "aridio.h"
```

```

src/grid2fits.c:The present module contains routines for transferring the LIME grid point data to or
from a FITS format file. The purpose of the present comment block is to describe the FITS file format.
Note that the amount and type of information stored depends on the 'data stage' of the grid struct, as
described in the header remarks to module gridio.c.
src/grid2fits.c:1 2) NN_INDICES (see explanation in the header to gridio.c)
src/grid2fits.c:1 3) LINKS (see explanation in the header to gridio.c)
src/grid2fits.c:See the comment at the beginning of module gridio.c for a description of how the
NN_INDICES extension relates to the grid struct.
src/grid2fits.c:See the comment at the beginning of module gridio.c for a description of how the LINKS
extension relates to the grid struct.
src/grid2fits.c:See the comment at the beginning of gridio.c for a description of how the LINKS
extension relates to the grid struct.
src/grid2fits.c:See the comment at the beginning of gridio.c for a description of how the NN_INDICES
extension relates to the grid struct.
src/grid2hdf5.c:#include "gridio.h"
src/grid2hdf5.c:The present module contains routines for transferring the LIME grid point data to or
from an HDF5 format file. The purpose of the present comment block is to describe the HDF5 file format.
Note that the amount and type of information stored depends on the 'data stage' of the grid struct, as
described in the header remarks to module gridio.c.
src/grid2hdf5.c:1 Group 'NN_INDICES' (see explanation in the header to gridio.c)
src/grid2hdf5.c:1 Group 'LINKS' (see explanation in the header to gridio.c)
src/grid2hdf5.c:See the comment at the beginning of gridio.c for a description of how the LINKS
extension relates to the grid struct.
src/grid2hdf5.c:See the comment at the beginning of gridio.c for a description of how the NN_INDICES
extension relates to the grid struct.
src/grid_aux.c:#include "gridio.h" /* For struct gridInfoType, struct keywordType etc */
src/gridio.c: * gridio.c
src/gridio.c:#include "gridio.h"
Binary file src/gridio.gcno matches
src/gridio.h: * gridio.h

```

- "." for where grep is locating the phrase in the text files
 - Remove reference to gridio from:
 - src/grid2hdf5.c
 - src/grid_aux.c
- References removed, hcn.pop output remains unchanged.
- Commented out gridio.c/.h and grid2fits.c/.h from Makefile.srcs

```

(base) kdarnell@gs691-kdarnell sublimed1dc_profile % ./compile_sublimed1d
Undefined symbols for architecture arm64:
  "_defaultDensyPower", referenced from:
    _default_gridDensity in defaults.o
  "_defaultFuncFlags", referenced from:
    _default_density in defaults.o
    _default_temperature in defaults.o
    _default_abundance in defaults.o
    _default_molNumDensity in defaults.o
    _default_doppler in defaults.o
    _default_velocity in defaults.o
    _default_magfield in defaults.o
  ...
  "_run", referenced from:
    _main in main.o
ld: symbol(s) not found for architecture arm64
collect2: error: ld returned 1 exit status
make: *** [/Users/kdarnell/code/sublimed1dc_profile/sublimed1dc] Error 1

```

