Subject: Announcing GDL 0.9
Posted by m_schellens on Wed, 01 Sep 2010 16:53:16 GMT
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GDL - GNU Data Language, an IDL 7.1 (see below for 8.0) compatible
incremental compiler

New highlights in 0.9:

* IDL 8.0 compatibility:
  - FOREACH statement
  - automatic garbadge collection for pointers and objects
  - negative index ranges
  - member function and procedure calls using '.' syntax

* GUI (widgets) programing
  (not complete yet - among others WIDGET_DRAW is not yet
implemented)

* support for compressed files

* new routines:
  - DIALOG_PICKFILE
  - FILE_COPY
  - FILE_DELETE
  - FILE_EXPAND_PATH
  - HIST_2D
  - INTERPOL
  - IMSL_ERF
  - MAP_CONTINENTS
  - POLYFILL
  - RESOLVE_ROUTINE
  - SPHER_HARM

* new keywords/calling sequences handled:
  - DEVICE, /INCHES, GET_SCREEN_SIZE
  - PRODUCT, /PRESERVE_TYPE, /INTEGER
  - REBIN: support for specifying new dimensions as an array
  - TOTAL, /PRESERVE_TYPE
  - FILE_SEARCH, /FOLD_CASE
  - STRSPLIT, /PRESERVER_NULL

Get GDL from:
https://sourceforge.net/projects/gnudatalanguage

Features (for those who never heard of GDL before):

FULL syntax compatibility with IDL up to 7.1

ALL IDL 7.1 language elements are supported, including:
- objects, pointers, structs and arrays,
- system, common block and assoc variables,
- all operators and datatypes,
- _EXTRA, _STRICT_EXTRA and _REF_EXTRA keywords...

Runs on many flavors of UNIX like operating systems (Linux, OS X, BSD, OpenSolaris, ...) and on windows using Cygwin or coLinux.

The file input output system is fully implemented
(Exception: For formatted I/O the C() sub-codes are not supported yet).

netCDF files are fully supported.
HDF and HDF5 files are widely supported.

Overall more than 360 library routines are implemented.
For a list enter HELP,/LIB at the command prompt and look for library routines written in GDL in the src/pro subdirectory.
A (currently not 100% up to date) list of subroutines available in GDL can be found here:
http://aramis.obspm.fr/~coulais/IDL_et_GDL/Matrice_IDLvsGDL_ intrinsic.html

SAVE and RESTORE are supported through Craig Markwardt's CMSVLIB library.

Graphical output is partially implemented for X windows, z-buffer and postscript output.
The PLOT, OPLOT, PLOTS, XYOUTS, SURFACE, CONTOUR and TV commands (along with WINDOW, WDELETE, SET_PLOT, WSET, TVLCT, LOADCT) are working
(important keywords, some !P system variable tags and multi-plots are supported.)

GDL has an interface to python (python routines can be called from GDL).
GDL can be build as a pyhton module (GDL subroutines can be called from python).

GDL is free software licensed under the GPL.

Check it out!
Marc