Subject: Re: Pv Wave Version 5.0
Posted by landers on Mon, 17 Oct 1994 13:59:11 GMT
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New stuff in WAVE 5.0, snipped from the Release_Notes file:

- PLATFORM SUPPORT:

  In keeping with Sun Microsystems corporate direction, the OLIT version of Wave Widgets and WAVE Toolbox will not be available in this release or in any future release.

  PV-WAVE for the Silicon Graphics platform has updated to IRIX version 5.2 which provides for dynamic linking and sharable objects. The LINKNLOAD function is now available for the Silicon Graphics platform.

- GUI-BASED DEBUGGER

  Wavedbg is a source level debugger with a graphical user interface for debugging PV-WAVE CL procedures. It is currently available only on Unix platforms. Features include:

  . Display a list of source files used by executing program
  . Display source code currently being executed, or any other source
  . Edit source from within Wavedbg, save, recompile, and continue
  . Regular expression based searching in source files
  . Breakpoints to control program execution
  . Display list of all variables in current execution context
  . Examine values of scalars, arrays, and structures
  . Mark variables for dynamic display as values change
  . Hooks for your favorite editor
  . On-line help

- MAPPING

  This release of PV-WAVE includes a powerful and easy to use tools to read map data and generate a wide variety of map projections.

  The Mapping tools include the following procedures:

  MAP - plots a map with a specified projection
  MAP_CONTOUR - plots (overlays) contours on a map
  MAP_PLOTS - plots vectors or points on the current map projection
  MAP_POLYFILL - fills specified regions of a map
  MAP_REVERSE - converts X-Y coordinates to longitude/latitude
  MAP_VELOVECT - overlays a 2D vector field plot on a map
  MAP_XYOUTS - adds text to a map

Features of the Mapping capability include:

. Simple, easy to use interface to 16 basic map projections
. Satellite projection for a true 3D representation of data
. Two built-in map datasets, easy to integrate custom map datasets
. Controllable data resolution
. Ability to create base maps on top of warped images
. Grid lines and labeled axes
. Ability to easily add new, user-defined map projections
. Source code is provided for easy customization and extensibility
. Three ways to draw lines between points, including great circle lines
. Easy calculation of ground distance between two points
. Transform 2D screen or data coordinates to longitude/latitude

Two map datasets are included with PV-WAVE: The World Databank II for global maps, and a dataset based on the USGS Digital Line Graph data for U.S. maps. You can easily create a PV-WAVE procedure tailored to read other map datasets and integrate them with PV-WAVE's new mapping capability.

- HDF/NetCDF SUPPORT

PV-WAVE now provides an extensive interface to the NCSA HDF C Library. The interface is divided into base functions and convenience routines. The base functions provide direct access from PV-WAVE to the HDF library.

- NEW APIs FOR ACCESSING WAVE VARIABLES FROM C AND FORTRAN

Included with this release are a number of new C- and FORTRAN-callable functions which programmers can use to get information about PV-WAVE variables, create new variables, modify existing variables, and use existing variables as parameters to Wave functionality. These functions can be called from user-written C or FORTRAN code which is in turn invoked via the LINKNLOAD command.

- AVAILABILITY OF PV-WAVE:SIGNAL PROCESSING TOOLKIT

A separately licensed, signal processing toolkit designed to work with PV-WAVE Advantage is now available. The PV-WAVE:Signal Processing Toolkit is designed to provide PV-WAVE Advantage users with a rich set of functionality specifically for signal processing applications. The Toolkit is included with the PV-WAVE Advantage V5.0 distribution along with an evaluation softkey.

- NEW CONVOLUTION AND CORRELATION ROUTINES

Two new functions have been added to PV-WAVE Advantage:

CONVOL1D - Compute discrete convolution
CORR1D - Compute discrete correlation

- NEW KEYWORD ON SAVE COMMAND FOR PV-WAVE POINT & CLICK COMPATIBILITY

- CHANGES TO LIBRARIES: files have been added and changed in the Standard Library, and the User Contributed Library.

The following procedures and functions have been updated in the Standard Library.

bilinear.pro (modified)
defroi.pro (modified)
grid.pro (modified)
grid_2d.pro (modified)
interpol.pro (modified)
nint.pro (modified and moved from lib/user)
poly_dev.pro (modified)
poly_plot.pro (modified)
all procedures containing the STOP command (modified)

The following procedures and functions have been updated in the User Contributed Library.

array_stats.pro (added)
emacs_keys.pro (added)
envelope.pro (added)
hex_to_float.pro (added)
guitools/demo/get_plot_coords_ex.pro (added)
guitools/ice_fit/* (added)
color_palette_all.pro (added)
cursor_design.pro (modified)
nint.pro (modified and moved to lib/std)
pfill_menu.pro (added)
plotm.pro (added)
plotm_examples.pro (added)
print_table.pro (added)
read_bmp.pro (added)
read_xbm.pro (added)
show_license (added)
sleep.pro (added)
solid.pro (added)
sum.pro (modified)
tvclip.pro (removed)
wposmenu.pro (moved from lib/std)

xfd.pro (added)

- BUG FIXES/GENERAL ENHANCEMENTS

  Many bugs have been fixed, and minor enhancements addressed, based on customer input.

  In particular, substantial improvements have been made to the usability and functionality of the controls provided in PV-WAVE for specifying clipping rectangles.

- LMTOOL: PROTOTYPE GUI INTERFACE TO LICENSE MANAGEMENT

  A prototype of a new, graphical user interface to the complete suite of softkey entry and license manager control is available in $LICENSE_DIR/bin/lmtool. The prototype is presently only available on Unix platforms.

- UNSUPPORTED CONNECTIVITY TO THE TCL/TK SCRIPTING LANGUAGE.

  A set of routines, based on code written by Joe VanAndel at the National Center of Atmospheric Research (NCAR), provides Tcl/Tk users access to PV-WAVE variabes and command line, including the window operations. At the time of this release, the routines which connect Tcl/Tk to PV-WAVE are unsupported.

- UPDATE TO FRAMEVIEWER VERSION 4.0.3 FOR ONLINE DOCUMENTATION

  Online documentation is now viewed via FrameViewer version 4.0.3. Although there are many benefits to version 4.0.3, the downside is there is no support for DEC ALPHA OSF/1, DEC ULTRIX or OpenVMS platforms. Support on SunOS with a Sparc 10 requires the SunOS patch #100726-12.
