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Command Line Tools

This document is a brief summary of the command line tools that are available in SeaSonde for advanced usage by those who know how about Unix scripting. Command line tools are executables which are designed to run a singular task without any interactive user interface. They are typically run in a shell like the Terminal.app application found in /Applications/Utilities/ folder or as part of a script like bash, Perl, Ruby, Python to name a few. SeaSonde uses these to supplement web serving and data processing. These command line tools can be very powerful for data manipulation and doing your own post processing.

If you're not familiar with scripting, you should start by reading up on the web about the BASH shell which is the default shell used by Apple's Terminal application.

The command line tools are located in /Codar/SeaSonde/Apps/Bin. If you open a new Terminal window, type 'CD /Codar/SeaSonde/Apps/Bin' and enter, then type 'ls' and enter which will show all the tools. You might notice that many of these are links that point to original which are included from their UI application in Viewers and Utilities folders. Every tool has it's own brief help info that's outputted, if run without any parameters or the parameter '–h' or '–help' is passed. You can then run the tool by typing './toolname' and add the desired parameters for example './gebco –help'. Some of these tools have more detailed help in the BinDocs folder.

A list of the the available tools follows.

Contours creates contour polygons for bathymetry map files created by the Gebco tool. This tool is used by SeaDisplay 8 to calculate contours for a site map.

CoastalMap extracts given area for coastline database. It is capable of creating a basic site map. SeaDisplay 8 uses this tool to dynamically create and edit site maps.

DDTool is a command line version of the DiagDisplay application for generating diagnostic plots as png or pdf output. RadialWebServer uses this tool to generate diagnostic plots for display.

Dockit is a simple tool used by the installer to add/remove icons from the Dock.

Gebco extracts bathymetry for given area and resolution from the 2GB GEBCO database. The output file is a CTF format and is easily readable. SeaDisplay 8 uses this to display bathymetry.

GetVersion reports the version of UI applications and command line tools which embed info.plist. This is used by SeaSondeReports to report all the SeaSonde versions.

LLUVCutoff can apply an area filtering of any LLUV file(s) using an angular sector file (angseg) or a coastline database extract found in a site map bundle or by specifying angular coverage as parameters. If set to just flag the vectors, you can reapply a new area filtering.

LLUVInterpolator can spatially and temporally interpolate any LLUV file(s). The best use for this is to create smoother looking movies in SeaDisplay by temporally interpolating to a finer time resolution.

LLUVMerger can merge any LLUV file(s) in a number of ways. This is useful to creating averaged velocities over longer times, stitching multiple areas into one , merging short–time radials into final radial merge times or translating to a different reference grid or set of LLUV location for comparison.

LLUVPointExtractor extracts a vector, or vectors, or averaged vectors from any set of LLUV sources over time and outputs a single file with each vector time stamped. This output file can be plotted in DiagDisplay (example velocity vs time) or used with LLUVtoKML to animate in GoogleEarth over time.

LLUVtoKMLTool will convert any LLUV into a kml file for plotting in GoogleEarth. Note that time information is retained so that you can animate the data.

RadialSiteReporter is run once a minute and generates the reports that are used by the RadialWebServer. Normally this is not run in the terminal unless you want to verify some of the issues that it might see.

SPMTool is a command line version of SpectraPlotterMap application. It can generate a png or pdf of any cross spectra file as well as extract information for

the cross spectra and any given range, doppler point. RadialWebServer uses this to plot cross spectra.

SeaDisplayTool is a command line version of SeaDisplay application. It can generate a png or pdf of anything SeaDisplay can plot. Not all SeaDisplay features are available in the too. RadialWebServer uses this to display Radials and Elliptical Maps.

SetCreateDate is a simple tool to change a file's creation date stamp. This can be useful if extending processing as Archivalist is typically configured to archive file into sub folder based upon the creation date.

SpectraCleaner is the heart of SpectraAverager which replaces CSPro. This tool performs a weighted average and filtering of cross spectra. It it used real-time in the system to convert CSQ into CSS for radial and wave processing. Used as a command line tool, one can quickly reprocess CSQ using alternate settings if desired.

WaveModelFilter is used to real-time average and filter wave results. It can be use to reprocess raw WVLR wave files with new averaging and filter settings.

WDTool is a command line version of the WaveDisplay application. It can generate png or pdf of wave files.

Revision History

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