GLOBE *Claritas*

seismic processing software

Module List

Category : Input/Output

DISCGATH	Reads any-sort SEG-Y file and outputs traces in CDP-sort
DISCGATHM	Reads multiple any-sort SEG-Y files and outputs traces in CDP-sort
DISCREAD	Reads SEG-Y or Claritas disc files
DISCSORT	Reads SEG-Y file and outputs sorted traces (no scratch file)
DISCWRITE	Writes seismic traces to Claritas SEG-Y disc file
DSORT_OFF	Version of DISCSORT configured for offset panels for DMO_FK
DSORT_SPS	Version of DISCSORT configured for SPSTAT
READGRID	Reads GMT,NetCDF,MatLab (etc) binary grid files
READSAC	Reads lists of SAC-formatted (usually earthquake) input
READSEGB	Reads SEG-B formatted data from tape
READSEGD	Reads SEG-D formatted data from disc or tape
READSEGY	Reads SEG-Y formatted data from disc or tape
READTSDB	Reads a Claritas time-slice database (.tsdb) file
REREAD	Reads Claritas DISCWRITE files in the middle of jobs
SCINTREX	Reads SEG-1 formatted seismic data
SEISREAD	reads GLOBE Claritas format HDF5 files from disc
SEISWRITE	writes out a GLOBE Claritas format HDF5 file
VIBCORR	Vibroseis correlation
WRITEGRID	Output seismic data as Matlab or NetCDF file
WRITESEGY	SEG-Y output to disc or tape
WRITETSDB	Sort into timeslices and create TS database

Category : Job control

DO	First part of iterative DO-ENDDO construct
ENDDO	Second part of iterative DO-ENDDO construct
ELSE	Part of IF-ELSEIF-ELSE-ENDIF construct
ELSEIF	Part of IF-ELSEIF-ELSE-ENDIF construct
ENDIF	Part of IF-ELSEIF-ELSE-ENDIF construct
END_64BIT	Copies 64-bit pseudotrace back to 32-bit seismic trace
HOLDIF	First part of HOLDIF-RECALL construct
IF	Part of IF-ELSEIF-ELSE-ENDIF construct
IFINFILE	Conditional branch using trace list file
IFNOT	Part of IF-ELSEIF-ELSE-ENDIF construct
JCS_UPDATE	Module for updating job control system files
MPIEND	End of parallel cluster block
MPISTART	Start of parallel cluster block
RECALL	End part of HOLDIF-RECALL construct
REPEAT	Repeats ensembles to produce test panels etc.
SEISJOB	Defines project name, line ID, JCS parameters etc.

Category : Trace scaling & math

AGC	Automatic Gain Control
AMPSELECT	Selects the N largest amplitude ensembles from the datastream.
BALANCE	Trace balance
CLIP	Clips trace values between two limits
CONVCORR	Convolves or correlates with a user-supplied filter
DECAY	Calculates trace amplitude decay functions
DIFF1	DIFF1 and DIFF2 are used to calculate the difference
DIFF2	between the seismic data at different parts of the job
DYFF1 DYFF2	DYFF1 and DYFF2 provide another DIFF1/DIFF2 pair should 2 sets be needed
EBALANCE	Ensemble-consistent trace balance
FFT1D	Forward 1-D Fourier transform (FFT)
FFT2D	Forward or inverse 2-D Fourier transform (FFT)
IFFT1D	Inverse 1-D Fourier transform (FFT)
INTEGRATE	Integrates trace data samples
OFFWT	Multiplies trace by offset-dependent scalar
POWER	Raises data samples to specified power
RANDOM	Adds random noise to input traces
RMSPOWER	Calculates surface-consistent RMS power for SCBALANCE
SCALE	Two-key time-variant trace scaling
SCBALANCE	Surface-consistent trace balance application
SPHDIV	Spherical divergence operator
TAPER	Tapers ends of seismic traces
TDERIV	Differentiates the seismic trace
UNAGC	Removes saved AGC gain functions
UNBALANCE	Removes the effect of a previous trace BALANCE or EBALANCE

Category : 1-D filtering

BUTTERFILT	Zero- or Minimum-phase Butterworth filter
DEBIAS	Removes DC bias from trace
FDFILT	Frequency-domain time and spatially varying filter
NOTCH	Monofrequency noise removal
PHASESHF	Applies a phase shift
RESAMPLE	Resamples with optional anti-alias filter
RHO	Frequency-domain rho filter for Tau-P applications
TVFILT	Time-domain time-varying filter

Category : Deconvolution & demultiple

DECONW	Wiener deconvolution (gapped or spike, time-varying)
DECONW_AC	Wiener deconvolution using previously saved operators
INVERSEQ	Post-stack inverse-Q deconvolution
INVERSEQ2	stablized inverse Q filter (phase and amplitude)
MEDEC	Minimum entropy deconvolution
MONKSUBT	Adaptive subtraction by constrained cross-equalisation
MULMOD	Multiple modeling by constant velocity multiple moveout calculation
OCTAVE_FK	Receiver Deghosting for Constant Cable Acquisition.
OCTAVE	Receiver Deghosting for Constant or Slant Cable Acquisition.
PRT_DEMULT	Parabolic Radon Demultiple
PSDECON	Post-stack Wiener deconvolution (gapped or spike) with mix
SCDECON	Surface-consistent Wiener deconvolution (gapped or spike)
SCSPEQ	Surface-consistent, zero-phase spectral equalisation
SOURCESIG	Extraction of wavelet using primaries and multiples
SPEQ	Zero-phase frequency-domain spectral equalisation
SPEW	Zero-phase frequency-domain spectral weighting
SRME	Surface consistent multiple computation phase
SRME2D	Surface Related Multiple Elimination, modeling phase
SRME3D	Surface Related Multiple Elimination, modeling phase
TVSPEQ	Time-varying Zero-phase spectral equalisation
WANGSUBT	Addaptive subtraction with a multichannel matching filter
WAVELET	Wavelet operations

Category : Statics

ADDPICK	Adds pick times from *.pic file into trace headers
AUTOPICK	Automatic first-break picking
BULKSHIFT	Application of bulk static shift
CDPSHIFT	Applies non-surface-consistent shifts from RESSTAT
DATUM_FIX	Elevation static correction-fixed datum
DATUM_FLT	Elevation static correction to floating datum
DATUM_SRD	Elevation static correction from floating datum to SRD
FLATTEN	Flatten and unflatten from a .dig file or trace headers
MAKESHF	Extracts static shifts from trace header and writes *.shf file
READSHF	Reads a Claritas static shift file and puts times into trace headers
RESSTAT	CDP-domain statics (SC,Non-SC,Time-variant etc)
SCSTAT	Converts DIPSTAT and CDPSTAT output to surface-consistent shifts
SPSTAT	Robust stack-power surface-consistent residual statics
SPSTAT2	Robust stack-power surface-consistent residual statics, for HDF5 datasets with improved 2D/3D denoise
SRDFILT	Filters static output from SRDSTAT
SRDSTAT	Source-receiver differential surface-consistent statics
STATIC	Application of elevation, residual, bulk statics etc.
UPHOLE	Extracts uphole times from raw traces
WRITEPICK	Extracts picks from SEG-Y headers for *.pic output

Category : Trace editing and kill

AIRWAVE	Linear noise mute defined by velocity and offset
AMPEDIT	Trace edit based on average amplitudes in window
AUTOMUTE	Automatic trace muting
COMBINE	Re-combines parts of a shot/CDP split by SPLIT
DESPIKEH	Automatic long, horizontally non-coherent spike muting
DESPIKEV	Automatic spike muting (vertical)
FILLHOLES	Fill holes in data (designed for sharkattacks)
HDRMUTE	Inner and outer trace muting from trace headers

MERGE	STORE1/STORE2/MERGE split and combine data streams
MUTE	Generalised muting of seismic data
POLYMUTE	Polygonal trace mute (*.pol file)
POLYSELECT	Removes/edits traces with {x,y} outside of a polygon
SMUTE	Surgical or end mute with interpolation
SPLIT	Splits a gather so part can be filtered (see COMBINE)
STORE1	STORE1/STORE2/MERGE split and combine data streams
STORE2	STORE1/STORE2/MERGE split and combine data streams
TREDIT	Whole trace edit (*.tre file)
TREMOVE	Totally removes the trace from the processing flow
TRFLAG	Flags traces (eg noisy traces) listed in *.ifl file
TRFLIP	Trace polarity reversal
TRMUTE	Whole or polygonal trace mute (*.trm file)
ZAP	Spike muting using sqc output files (*.dsp)
ZEROMUTE	Stores first non-zero sample; mutes to that position

Category : 2-D filtering

DUSWELL	Swell noise attenuation
FKFILTER	Frequency domain FK Filter by dip
FKMUTE	Generalised muting of FK spectra
FK_ALIAS	Used to determine effect of non-aliasing FK filter
FK_FILT	Frequency-domain FK filter by polygon or dip
FK_TIME	Time-domain FK filter by polygon
KFILT	K-filter for 2D seismic MEDIAN_H Horizontal (1-D) median filter
NORMCDP	Repeated-offset trace averaging within CDP's
PRTF	Forward Parabolic Radon Transform
PRTI	Inverse Parabolic Radon Transform
QFK	Fast frequency-domain FK filter by dip
RADIAL	Radial trace transform (forward & inverse)
SUHARLAN	Harlan transform (SU)
SURADON	Generalised Radon transform (SU)
TAUP	Forward Tau-P process by slant-stack
TAUPFK	FK-domain Tau-P process
TAUPINV	Inverse Tau-P process
TRINTERP	Trace interpolation/extrapolation

Category : Analysis processors

AREAL	Outputs text file with areal data attributes
ATTRIBUTE	Outputs Hilbert transform, instantaneous attributes etc.
AUTOCOR	Calculates autocorrelation function
HVA	Horizon velocity spectrum analysis
NOISE_QC	Creates AMP/Noise QC headers for data QC in the AREAL application.
NMOPICK	Automatic semblance picker - takes VELSPEC traces & outputs *.nmo file
SPECTRAN	Hardcopy plot of spectral analysis (power, phase etc)
VELSPEC	Velocity spectrum analysis for sqc picking, or hardcopy plot
VELSPEC4	4th order velocity spectrum analysis

Category : NMO and stack

ANGLE	Produces angle gathers from offset gathers for AVO
ANGLETIMES	Adds angle mute times into trace headers
AUTOSTACK	Automatic adaptive stack
AVOSTACK	Outputs AVO attribute traces
LMO	Linear Move-out operator
NMO	Forward and inverse NMO with optional stretch mute
NMO4	Forward and inverse 4th order NMO with optional stretch mute
NMOTRACE	Replaces data traces with NMO traces
PSTACK	Partial stack processor
RMO	Residual Moveout Application with optional Stretch mute
STACK	Stack of CDP (or shot) gathers
STACKSHOTS	Vertical stack (eg of repeated shots) etc.
TRSUM	N:1 trace sum by trace or ensemble

Category : Geometry, sorting & fill

ADDGEOM	Adds geometry database information into trace headers
ADDLLD	Adds marine latitute/longitude, water-depth, etc into trace headers
ADDNAV	Adds marine navigation into headers from UKOOA P1 input
ADDSPS	Reads SPS files in a job flow and writes the survey information into trace headers
ADDP190	Adds marine geometry information into trace headers from P190
BIN3D	Sets 3D CDP binning geometry into trace headers
BINSORT1	Forwards binned sort (any trace header key)
BINSORT2	Inverse (un)sort to follow BINSORT1
CDPSORT	CDP gather using *.geom database
CDP_XYZ	Adds CDP coords & elevations into stacked trace headers
CHECKGEOM	Checks geometry in headers for possible problems
CUBE	Forms a 3-D data cube from ragged-edged CDP list
DEOFFREG	Undo regularisation of the offset distribution
GENSORT	Generalised trace sort on any trace header key
LATLONXY	Takes lat/long position information in trace headers and converts to eastings/northings coordinates in metres.
MAKEGEOM	Writes a *.geom file using trace-header information
MGEOM	Add marine geometry to headers
MISSING	Flags or fills in missing traces/gathers
MRECXY	Adds receiver/CMP X,Y given .nav file of shotid,x,y and offsets
OFFREG	Regularise the offset distribution
PAD	Pads end of sections with zero or repeated traces
REORDER	Re-orders the traces within an ensemble by any header key
SHIPTRACK	Uses time,x,y file to add source coordinates into trace header
STITCH	N-dimensional parallel pre-stack interpolation based on map file from STITCH_PREP module
STITCH_PREP	creates a map file that defines the traces to be used to populate any given offset bin
SUPERGATH	Form super-gathers from input ensembles
TRSWAP	Swaps the trace data samples for a pair of receivers

Category : Migration

DMO3D	3D DMO in T-X domain (Integral method)
DMO_FK	FK-domain depth-variable DMO
DMO_TX	Kirchhoff common-offset DMO
EOM	Equivalent offset migration
FDMIG	Finite-difference post-stack migration
FDMIG25	2.5D Finite-difference post-stack migration
GAZDAG	Jeno Gazdag's phase-shift migration
IMAGE_3DKP	3D Kirchhoff post-stack time migration
IMAGE_K2D	2D Kirchhoff pre-stack depth migration
IMAGE_K3D	3D Kirchhoff pre-stack depth migration
IMAGE_K2T	Kirchhoff 2D pre-stack time migration
IMAGE_K3T	Kirchhoff 3D pre-stack time migration
KIRCHHOFFT	Post-stack Kirchhoff time migration
KIRCHHOFFV	Poststack Kirchhoff Time migration with variable velocity
KPRET2D	Prestack Kirchhoff Time migration (Single-CPU)
KPRET3D	3D Prestack Kirchhoff Time migration – non-parallel
POSTDM2D	2D Kirchoff post-stack depth migration
POSTDM3D	3D Kirchoff post-stack depth migration
PRESDM	Prestack Kirchhoff Depth migration (Single-CPU)
PSMIG	Phase-shift migration with turning rays
PSMIG25	2.5D phase-shift migration with turning rays
STOLT	FK-domain Stolt migration
STOLT25	2.5D FK-domain Stolt migration
TDCONV1	Time to depth conversion
TKMIG	Time-wavenumber migration

Category : Coherency filtering

FXDECON	FX-domain complex Wiener deconvolution
FXRUNMIX	FX-domain weighted running mix
QFKPS	Post-stack version of QFK
RUNMIX	Time-domain running mix(pre/post-stack)
SEEP	Signal Enhancement using Envelope Processing
SEMBSMOOTH	Semblance-smoothing coherency filter
SLSD	Spatial Linear Signal Detector (Tau-P)
SVDFILT	Zero-lag Karhunen-Loeve transform

Category : Plotting

BACKGROUND	Display data attributes in background of plot
BITPLOT	Quick, small, trace plot - a line of bits is set on or off
DATUMPLOT	Puts tick on trace to indicate position of floating datum or elevation
HDRPLOT	Plots trace header values on RASTER output file
HDRTICK	Plots trace header values by adding a tick to trace
HORIZONS	Adds digitised horizons to RASTER output file
IVSPLOT	Plot module for Input Vertical Seismic Object utility
PANELTEXT	User-specified strings for parameter labelling in XVIEW/PLOTLABEL
PLOTLABEL	Produces full plot labelling to attach to RASTER output
RASTER	Produces raster plot file for HP DesignJet or Versatec
SIDELABEL	Side label for adding to RASTER hardcopy output
TIMESLICE	Convert to timeslices, or graphical timeslice display
TOPLABEL	Top plot (elevation, statics, comments, v elocities etc.) for RASTER output
TRACEPLOT	Produces hardcopy plot at irregular trace spacing
UNSLICE	Convert back from timeslice to conventional seismic
XVIEW	Interactive seismic data display

Category : Synthetic modeling

SYN2WAVE	2D synthetic waveform generator
SYNGEOM	Creates dataset from geometry database
SYNHORIZ	Synthetic horizon generator from .dig file
SYNRAY	2D synthetic raytracing generator
SYNSHOT	Modelling of synthetic shots for horizontal layering
SYNVERT	Vertical synthetic using reflectivity method
SYNWAVE	1-D synthetic waveform generator

Category : VSP processing

CDEMOD	Calculates complex demodulate
ROTATE	3-Component trace rotation
ROTATE4C	4-Component trace rotation for VSP analysis
ROTATE6C	6-Component source equalisation for VSP analysis
SEPPS	Frequency-domain P and S wave separation for VSP

VSPSTACK	Stack VSP data with some migration

Category : Trace headers & data

ADDDIG	Adds digitised horizon times into trace header location
ADDHDR	Adds tablulated values into trace headers
CHECKGEOM	Checks geometry in headers for possible problems
CHECKHDR	Checks for possible problems in trace headers
CHECKTR	Checks for possible floating-point problems in trace data
DELHDR	Deletes an extended trace header entry
HDRMATH	Header math manipulation
JULIANSEC	Add a timestamp to the trace headers
NAVHDR	Defines new trace header names for 3D marine navigation
NEWHDR	Define a new trace header name
OFFBIN	Migrate trace header offsets to binned values
PSEUDOMATH	Mathematical operations on the contents of a trace and/or a pseudotrace
RANGE	Prints the maximum/minimum range of header values
RENUMBER	Renumbers the output primary and/or secondary key values
RHEADER	Inserts ASCII text into 3200-byte SEG-Y reel header
RHEADER2	Inserts ASCII text into 3200-byte SEG-Y reel header
RUNPYTHON	Applies a custom Python code to the trace headers and data
SETCHANNEL	Sets values in the reel or trace header
SETHEADER	Sets values in the reel or trace header
SETKEY	Resets the primary and/or secondary key index for a dataset
SETLASTTR	Sets last trace flag for the last trace in an ensemble
SETSCALES	Sets or modifies the COORD_SCALE or HT_SCALE header
TRFUDGE	Allows user-written code to be applied to seismic data
TRPRINT	Lists trace data samples and header variables
TXTHDR	Add any-text-file columns into trace headers

Category : Miscellaneous

COMMAND	Runs a command before or after a flow
COMMENT	Puts a comment in the job display
EXAMPLE	Example processor for $GNS_HOME/ local/modules
HISTORY	Displays/clears processing history
MULTI	Template for multi-channel processors in Fortran
MULTI2	Template for multi-channel processors in Fortran (ntr_in != ntr_out)
MULTI_C	Template for multi-channel processors in C
PS3D	Template for 3-D post-stack processing
ROLLING	Template for rolling-buffer multi- channel module
SINGLE	Template for single- channel processors
SINGLE_C	Template for trace-by- trace processor in C
SNOOP	Prints message every n'th trace or ensemble
SU	Pipes data to & from an SU processor module