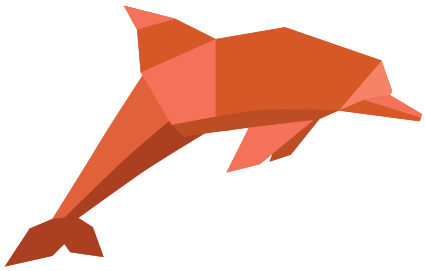

RadExPro seismic software

Ver. 2016.3. **Technical Specification**

	Start	Professional	Real-Time
I/O			
Input data from SEG-Y, SEG-2, SEG-B, SEG-1, SCS-3 files, with optional header remapping	X	X	X
Input data from SEG-D, SEG-D (rev.2) and FairFieldNodal Receiver Gather files, with optional header remapping		X	X
Input GPR data from LOGIS, Zond, RAMAC/GPR, GSSI, Pulse EKKO formats	X	X	X
Input trace from ASCII file	X	X	X
Input data from user-defined demultiplexed format with trace header information	X	X	X
Reading data from tapes	X	X	X
Data output to SEG-Y files	X	X	X
Geometry assignment			
Import from ASCII	X	X	X
Import from SPS and UKOOA P1-90 files		X	X
Calculation using built-in equation calculator	X	X	X
Display and editing using built-in spreadsheet editor	X	X	X
Dedicated module for near-surface geometry assignment	X	X	X
Dedicated module for marine geometry assignment	X	X	X
Dedicated module for VSP geometry assignment		X	X
Crooked line 2D/3D binning		X	X
Trace editing			
Resample	X	X	X
Kill trace	X	X	X
Zero-padding	X	X	X
Inverse	X	X	X
Muting	X	X	X
Trace length change	X	X	X
Header fields manipulations			
Mathematical operations	X	X	X
Spreadsheet editor	X	X	X
Import from ASCII files, export to ASCII	X	X	X
Smoothing average	X	X	X
Shift of header values to specified number of traces	X	X	X
Header enumerator	X	X	X
Header NMO/NMI	X	X	X
Surface-consistent calibration (e.g. for static shifts or amplitude values)		X	X
Graphs	X	X	X
Cross-plots and histograms		X	X
Dataset combining			
Trace-by-trace subtraction/addition of 2 datasets	X	X	X
Vertical merge of 2 datasets along a horizon		X	X
Amplitudes			
Amplitude corrections: linear (spherical divergence), exponential, automatic gain control (AGC), trace equalization, time-variant gain	X	X	X
AGC removal	X	X	X
Ensemble equalization	X	X	X
DC removal	X	X	X
Statics			
Elevation statics calculation	X	X	X
Residual statics calculation		X	X
Maximum power autostatics		X	X
Correlation statics calculation		X	X
Apply statics	X	X	X

Deconvolutions and spectral shaping			
Signature	X	X	X
Zero-phase	X	X	X
Predictive	X	X	X
Spiking	X	X	X
Surface-consistent		X	X
Nonstationary predictive		X	X
F-X predictive filtering (F-X deconvolution)		X	X
3D F-X-Y predictive filtering (F-X-Y deconvolution)		X	X
Phase	X	X	X
Wavelet Extraction		X	X
Kolmogoroff spectral factorization		X	X
Derive Match Filter		X	X
Spectral whitening	X	X	X
Spectral shaping		X	X
F-K Amplitude Power		X	X
Multicomponent processing			
Hodogram analysis		X	X
2C/3C Rotation		X	X
Rotation of FairFieldNodal multicomponent data		X	X
Interpolation			
Trace interpolation along the line	X	X	X
Interpolation of set of 2D lines into a 3D volume		X	X
3D F-Kx-Ky Regularization		X	X
Filtering, trace transforms and trace math			
Frequency filtering (common and time-variant): - simple bandpass - Ormsby bandpass - Butterworth high-pass/low-pass/bandpass - notch	X	X	X
2D average/median/alpha-trimmed filtering	X	X	X
F-K filtering	X	X	X
F-X predictive filtering (F-X deconvolution)		X	X
3D F-X-Y predictive filtering (F-X-Y deconvolution)		X	X
Radon transform (direct and inverse)		X	X
Amplitude spectrum calculation	X	X	X
Phase spectrum calculation	X	X	X
Autocorrelation and crosscorrelation functions	X	X	X
Logarithm and exponent of trace	X	X	X
Adaptive wavefield subtraction		X	X
Convolution	X	X	X
Trace/trace and trace/scalar arithmetic	X	X	X
Power of trace		X	X
Radial trace transform (direct and inverse)	X	X	X
Burst noise removal	X	X	X
Time frequency domain (TFD) noise attenuation		X	X
Time frequency domain (TFD) noise attenuation (manual)		X	X
Time-depth conversion			
Conversion between time and depth domain using different types of velocity functions	X	X	X
Migrations and DMO			
Pre-/Post-stack 2D/3D Kirchhoff time migration		X	X
F-K Stolt migration	X	X	X
3D F-K Stolt migration		X	X
T-K migration	X	X	X
2D F-K DMO		X	X
Velocities and CDP stacking			
3D CDP binning		X	X
3D Regularization		X	X
Crooked line 2D CDP binning		X	X
CDP gathers	X	X	X
Super gathers	X	X	X
Velocity manipulation		X	X
Interactive analysis of stacking velocities	X	X	X

Horizon-based velocity analysis		X	X
NMO/NMI-correction	X	X	X
Stacking	X	X	X
Offshore data processing			
Marine geometry assignment	X	X	X
Import geometry from UKOOA P1-90 files		X	X
Dropped/missed shots correction	X	X	X
Import tidal statics		X	X
HiRes marine statics calculation		X	X
De-bubbling deconvolution		X	X
2D SRME		X	X
Near-offset marine data demultiple		X	X
SharpSeis™ adaptive deghosting/broadband processing		X	X
QC and attribute analysis			
Pre-stack shot/receiver gather QC: estimation of mean, 2D RMS and mean 1D RMS amplitude, signal-to-noise ratio, resolution and apparent frequency pre-stack within an arbitrary polygon or a rectangular window		X	X
Fold and offset sampling calculation		X	X
Survey, fold and offset sampling maps		X	X
Analysis of attribute dependency on linked cross-plots and histograms		X	X
Mapping attributes on top of topography background		X	X
Estimate of average, RMS, minimum, maximum, absolute maximum amplitude post-stack within a window along a horizon		X	X
Determination of time of maximum, minimum, and absolute maximum amplitude post-stack within a window along a horizon		X	X
Estimate of peak frequency, apparent frequency, visible frequency, centroid frequency, and frequency		X	X
bandwidth post-stack within a window along a horizon		X	X
Estimation of signal-to-noise ratio post-stack along a horizon		X	X
Computation of auto-correlation and cross-correlation functions	X		
Interactive estimate of velocities of all types of waves	X		
Reflection strength, instantaneous frequency, instantaneous phase		X	X
Offshore real-time QC			
Real-time SEG-D input			X
Parallel execution of QC flows			X
Shot QC			X
Automated first-break picking			X
Near-trace gather QC			X
Real-time 2D CDP stack			X
RMS amplitude map			X
Frequency map			X
SNR map			X
Attribute and header plots			X
Bubble pick time/amplitude and bubble period maps			X
Towing depths control based on spectrum notches			X
Saving all QC results to project DB			X
Refraction			
Processing time-curves of refracted waves (plus-minus and GRM)	X	X	X
First-break travel-time tomography	X	X	X
Vibroseis			
Correlation	X	X	X
Surface Wave Analysis			
Multichannel Analysis of Surface Wave (MASW)	X	X	X
VSP			
VSP geometry assignment for vertical or inclined wells		X	X
Hodogram analysis, 2C and 3C rotation		X	X
Generation of synthetic seismograms for different wave types		X	X
Separation of wavefields of different wave types		X	X
Calculation of arrival time of direct wave or reflected wave from a specified reflector for horizontal layered model		X	X
Layer velocity modeling		X	X
Estimation of Q		X	X
Far-offset VSP NMO-correction		X	X
Import of well-log data, import and export of velocity models		X	X
Joint interpretation of VSP, logging, and seismic data		X	X

VSP Kirchhoff migration		X	X
VSP-CDP transformation		X	X
Display and printing			
Various modes of data display	X	X	X
Display of WT/VA traces on top of color-coded velocity or seismic data	X	X	X
Support of several data displays at a time, several datasets in one display	X	X	X
Synchronized scale, scroll and gain in several display windows for data comparison	X	X	X
Interactive calculation of frequency spectrum and F-K spectrum of arbitrary data fragment	X	X	X
Display of several spectrum graphs in one window	X	X	X
Display of trace header fields	X	X	X
Display of lines, attributes, horizons, on the interactive map	X	X	X
Interactive display of data along an arbitrary line selected on the Map	X	X	X
Display of attributes on linked cross-plots and histograms		X	X
Printing and export of cross-plots and histograms to a bitmap		X	X
Printing of processing results with print preview	X	X	X
3D display			
3D volume display		X	X
Data and processing management			
Processing within projects. A project can be easily moved to a new location together with all associated data and processing parameters	X	X	X
Work with several projects at a time	X	X	X
Processing flows can be combined into several queues and run in parallel	X	X	X
Processing flows can be copied with all procedures and parameters	X	X	X
Export/import of processing flows	X	X	X
Export/import of datasets in RadExPro data exchange format	X	X	X
Processing history	X	X	X
Data run-time resorting on input into the flow	X	X	X
Fast resorting of big data volumes		X	X
Combining several flows into processing queue, parallel execution of several queues		X	X
Batch processing of a number of files with the same flow		X	X
Interpretation			
Horizon picking, manual and automatic	X	X	X
Gridding of horizons and attributes	X	X	X
Attribute calculation along horizons		X	X

*Technical specification is for information only and is subject to change without prior notice.

Recommended Minimal System Requirements:

Intel Core i-5 CPU
4 Gb RAM
OS Windows Vista/7/8/10

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