Echoview 8 release notes

Echoview 8 contains a valuable range of new features and expanded functionality, including the introduction of the Echoview Data File Format, the Attenuated Signal Removal operator, and an overhaul of multibeam surface functionality.

Echoview 8 is available to all license holders with an up–to-date Maintenance and Technical Support subscription. To find out if your subscription is current please contact sales@echoview.com.

Attenuated Signal Removal operator

The new Attenuated Signal Removal operator enables the identification of pings containing attenuated signal (sometimes called ping dropouts) as a result of air bubbles passing the transducer face.

When attenuated signal is identified in a ping, this operator will replace the samples in affected pings with a value calculated from a statistic of the neighboring samples, or with No Data values.

The operator is based on the attenuated signal filter algorithm described in Ryan T. E., Downie R. A., Kloser R. J., Keith G. (2015) Reducing bias due to noise and attenuation in open-ocean echo integration, ICES JMS, 72:2482-2493, and adds to Echoview's suite of one-step noise and unwanted signal removal operators, including Background Noise Removal, Impulse Noise Removal and Transient Noise Removal.
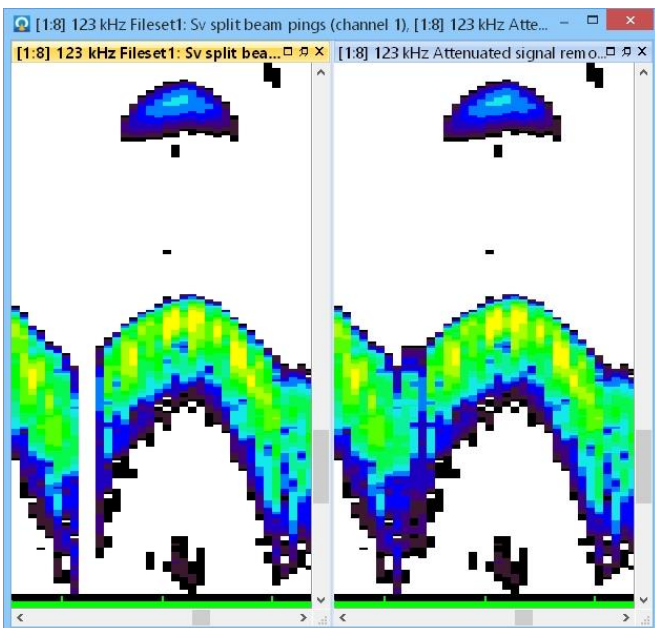
Data with attenuated signal (left) and after applying the Attenuated Signal Removal operator (right).

Echoview Data File Format
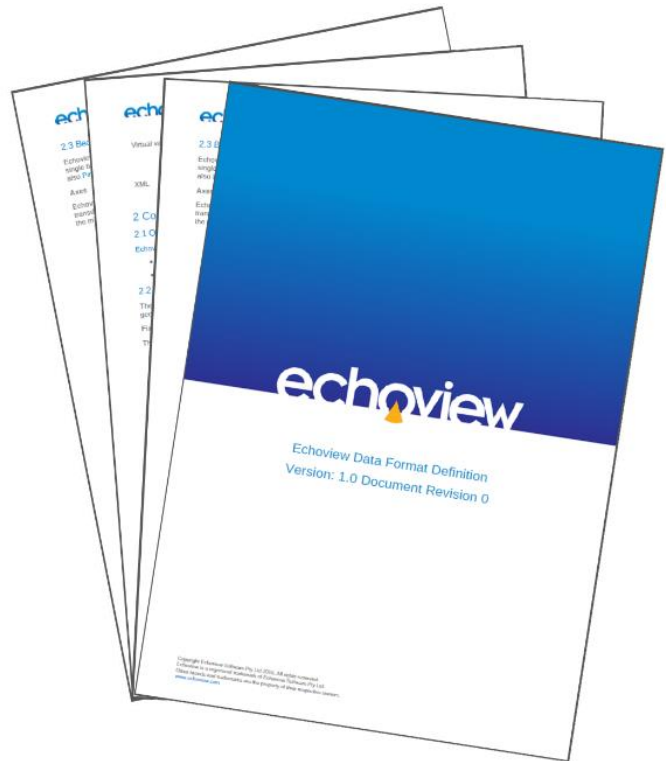
Echoview 8 includes documentation and support for a brand new, Echoview-defined data file type for storing echosounder and sonar data, as well as supporting measurements.

The Echoview data (EVD) file format enables hardware manufacturers and Echoview users to create Echoview-compatible files containing data from hydroacoustic systems that are not currently supported by Echoview. Files contain both XML elements and binary data. A range of single beam and multibeam data types can be written to EVD files, alongside position and motion measurements. Optional parameters, such as calibration settings, can also be included.

Additionally, almost all variables derived from file formats supported by Echoview can be exported (written) to EVD files, and then added back into our software for further processing, providing performance benefits, particularly for Simrad EK80 wideband variables.

The Echoview data file format will continue to evolve in future versions of Echoview. We encourage feedback and suggestions for future revisions of the file format.

The data file format definition documentation can be downloaded from the Echoview website.

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Multibeam surfaces: an overhaul

We've improved and added to Echoview's features for creating, managing and using bottom surfaces when working with multibeam data, with new features and improvements to existing features including:

- Multibeam variables now include an Analysis page in the Variable Properties dialog, where surfaces can be used for exclusion of data from further analysis

- The Processed Data operator now supports multibeam data as an input operand
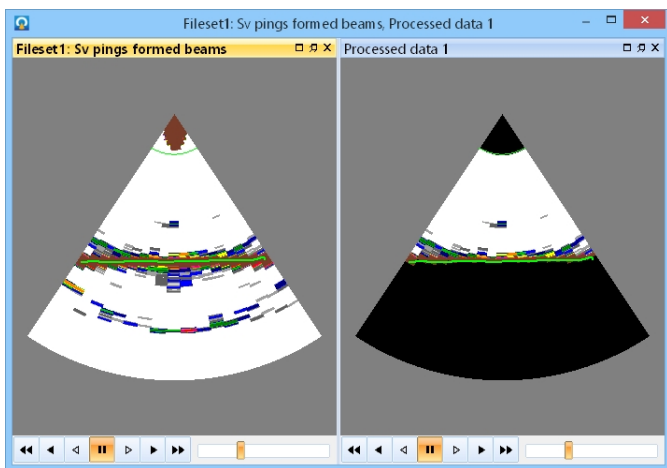
Initial multibeam data (left) and data after applying exclude above and below surfaces and the Processed Data operator (right).

- Virtual surfaces are now available, and can be created at either a user defined fixed range or fixed depth

- The Line tool is now the Line and Surface tool and can be used to create surfaces
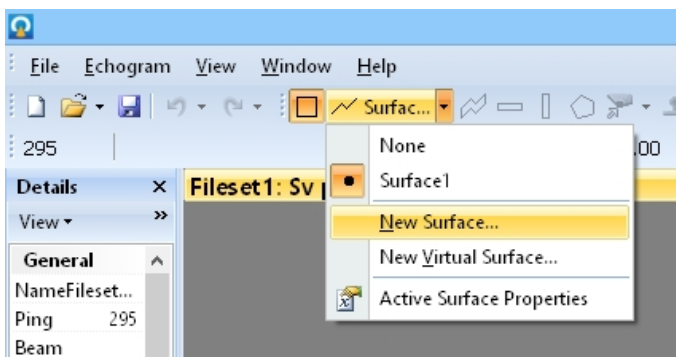
- The Scene Manager dialog has been removed, with scenes and objects, including surfaces, now accessible and managed in the Dataflow window

Other improvements

- The Roll Range Bitmap operator has been renamed to Motion Range Bitmap, and now also accepts pitch and heading data as input

- Single beam echograms can be exported to QPS SD object files as curtains. These files can be viewed in QPS software including Fledermaus and iView4D

- More settings available in the Variable Properties dialog when multiple variables are selected
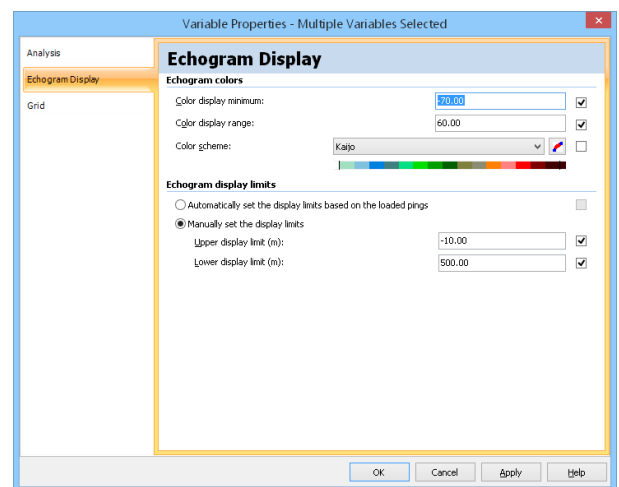
- COM support for minimum TS threshold settings, and more settings for noise removal operators

- Simrad Ex60 and ME70 power (dB) is now provided as a raw variable

- Improvements to Simrad EK80, ASL AZFP and Sonic KFS/KFC file format support

- Support for BlueView multi-head transducer data, and Simrad SU90 omnisonar data files

- The Media module now includes support for the display of still images, alongside videos, that can be synchronized to your echogram data

- The Tape measure tool now allows measurements within a ping, including when no GPS information is available
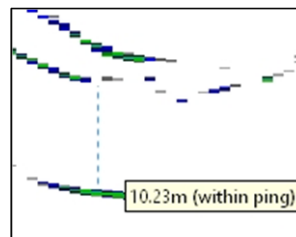
Please contact sales@echoview.com for information on updating to Echoview 8.

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