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FOR IMMEDIATE RELEASE

Plexon Inc Launches Offline Sorter™ Neural Spike Sorting Software v4

DALLAS, TX -- (April 23, 2015) - Plexon Inc, the leader in advanced hardware and software solutions for neuroscience and behavioral research, is pleased to launch the fourth version of Offline Sorter™ Neural Spike Sorting Software (OFS) just in time for the 6th Annual Plexon Neurophysiology & Behavior Workshop starting Monday, April 27. Version 4 is loaded with new sophisticated algorithms and functionality including the ability to analyze overlapping waveforms, perform signal-to-noise ratio (SNR) computations, apply high-cut filtering to continuous channels, exploit digital referencing and many more features including expanded sorting methods. Neuroscientists will further benefit from the convenience of fast and easy remote upgrades, no cost future version 4 releases and lifetime technical support.

Researchers will now have the power to enable the analysis of overlapping waveforms. Occasionally, where the neural firing rate is high, spikes can be lost from the analysis because of overlapping waveforms. One neural firing may result in a threshold crossing and initiate the capture of a spike, but before the spike window is completed (i.e. before all the samples within the Waveform Window have been collected), another neural firing is picked up on the same electrode. This results in an overlapping waveform which will have a spike waveform that is not shaped like the unit template of either of the neurons involved. These overlapping waveforms typically show up as outliers, and usually are not sorted into any unit by automated sorting algorithms. The new Overlaps Analysis view can be used to help “rescue” some of these overlapping waveforms, by first detecting that a given waveform may have been produced by overlapping unit firings, and then resolving them by reconstructing the non-overlapped versions of the two overlapping spikes. This then allows the formerly-overlapping spikes to be properly sorted.

Through the new Threshold Scan Graph view, researchers will be able to scan through a range of threshold values, then create and display a graph of the number of extracted spikes and the signal-to-noise ratio as a function of the threshold. When activated, every time a spike extraction is done at a specific threshold, a SNR calculation is done following the extraction, and the SNR value along with the number of spikes extracted is plotted on the graph. This can assist in deciding where to set the threshold for extracting spikes from continuous data.

To complement the ability to select low-cut filtering, OFS version 4 now also offers high-cut filtering. This can be used to obtain local field potentials (LFPs) from a wideband continuous signal by removing the high-frequency spike activity. The same filter parameters apply to the high-cut filter, except that it removes the high frequency signal energy instead of the low frequency signal energy.

New digital referencing provides the researcher an automated tool for subtracting noise from channels that contain interesting spike data. Specific continuous sources can be selected for noise reduction, and there are several options for selecting and averaging the reference channels (the channels that contain the noise) such as using either Common Average Reference (CAR) or Common Median Reference (CMR) techniques.

Compounding the above, OFS version 4 is further packed with additional new functionality including but not limited to the ability to load multiple PL2™ files simultaneously; new L-Ratio and Isolation Distance sort quality metrics; support for Band and Line sorting methods; ability to name and manipulate Time Segments exportable to NeuroExplorer® files; new scan modes including the ability to scan using different random initial seed clusters; support for multiple spike Sources; ability to

display arbitrary combinations for continuous and spike data together for a channel in the Timeline View; the ability to use standard deviation or Median Absolute Deviation (MAD) to calculate fit or band fit tolerances and much more. Neuroscientists will also appreciate the countless improvements, a few customary bug fixes and the complete *Offline Sorter, Offline Spike Sorting Software Version 4 User Guide* that comes packaged with the program.

Researchers operating OFS version 2 or version 3 are encouraged to upgrade to the most robust and industry aligned package. Upgrades are fast and painless as they can be performed remotely. License key, serial number-specific upgrade codes can be distributed electronically, and the version 4 software can be downloaded from the website. Researchers can be up and running with the newest, most advanced software very quickly after an order is placed.

In adherence with high security protocols, Plexon will not be releasing new software for use on unsupported operating systems. Accordingly, OFS version 4 will no longer run on Windows® XP, but rather on Windows 7 only. The final version of OFS that supports Windows XP is OFS version 3.3.5 and will remain available on the Plexon website.

OFS version 4 has been six years in the making and will empower researchers to take neural signal sorting to a whole new level. All future releases within version 4 will be available at no charge to those with OFS version 4 activated license keys. Any purchase of OFS is accompanied by Plexon's legendary Lifetime Technical Support.

For more information regarding purchasing or upgrading to OFS version 4, contact info@plexon.com.

About Plexon Inc

Plexon is a pioneer and leading innovator of custom, high performance data acquisition, behavior and analysis solutions specifically designed for scientific research. We collaborate with and supply thousands of customers including the most prestigious neuroscience laboratories around the globe driving new frontiers in areas including basic science, brain-machine interfaces (BMI), neurodegenerative diseases, addictive behaviors and neuroprosthetics. Plexon offers integrated solutions for *in vivo* neurophysiology, optogenetics and behavioral research -- backed by its industry-leading commitment to quality and customer support. www.plexon.com.