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News

Spike2 6.02 nearing release

This version includes the facility to export Spike2 files directly to MATLAB and also contains script commands for MATLAB communication. See the Spike2 article below for further details.

Other new features include spike collision analysis to separate pairs of spikes by comparing the recorded waveform with pairs of templated spike shapes, interactive selection, and re-coding of spikes when displayed in Overdraw WaveMark mode and the option of display of event time on the Z-axis in the clustering dialog.

Meetings and events

Thank you to all those who visited our booths during the Society for Neuroscience meeting in Atlanta 15th – 18th October and the American Heart Association Scientific Sessions meeting in Chicago 12th – 14th November.

IMN Workshop on Spinal Cord Injury 2006

UCL Institute of Neurology, London, UK
December 8th 2006

Biophysical Society Annual Meeting 2007

Baltimore, Maryland, USA
March 3rd – 7th 2007

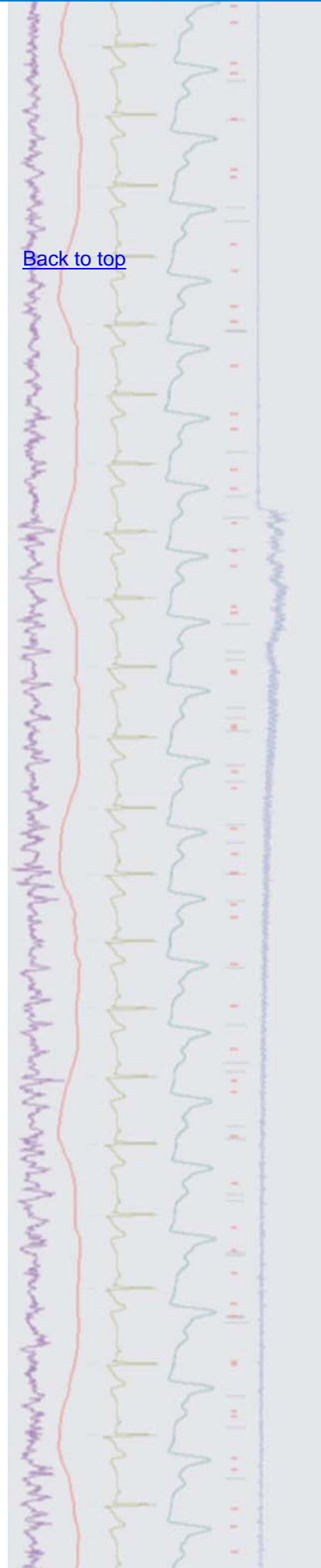
Latest versions of Spike2 and Signal

The latest updates for Spike2 and Signal are available from the [CED downloads](#) page, or by clicking on the links in the table below. Demonstration versions of the latest software are also available.

Spike2 downloads	Signal downloads
Spike2 version 6.01	Signal version 3.07
Spike2 version 5.16	Signal version 2.16
Spike2 v6 demo	Signal demo

A full list of the new features and changes in the latest software versions is available from the website.

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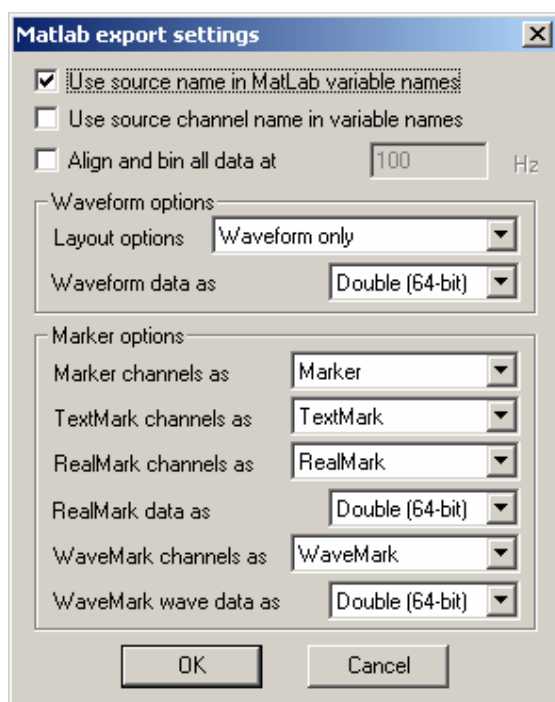




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- Q. It would be very useful to be able to export Spike2 files to MATLAB for further analysis. Do you have any plans to allow this in future versions?
- A. The soon-to-be released version 6.02 of Spike2 includes support for external exporters. These allow you to save data, result and XY view data to other file formats. The first available exporter writes Spike2 data to MATLAB files.

Once MATLAB support has been selected during the Spike2 installation, you can export Spike2 data as .mat files from the Export as... function in the Spike2 File menu. To export XY or result view data, select Save as... and the .mat file type. Associated dialogs control the time range of data, the channel types to include and the required format, depending on the type of Spike2 file you wish to export.



Export settings dialog for data files

As well as support for the export of Spike2 files, there are new script commands to move values between Spike2 and MATLAB variables and execute arbitrary commands in MATLAB. Unlike the file export function, these script commands can only be used on systems that have a licensed copy of MATLAB installed.

Full documentation on these new functions can be found in the Spike6\Export folder after installation of Spike2 6.02.

MATLAB is a registered trademark.

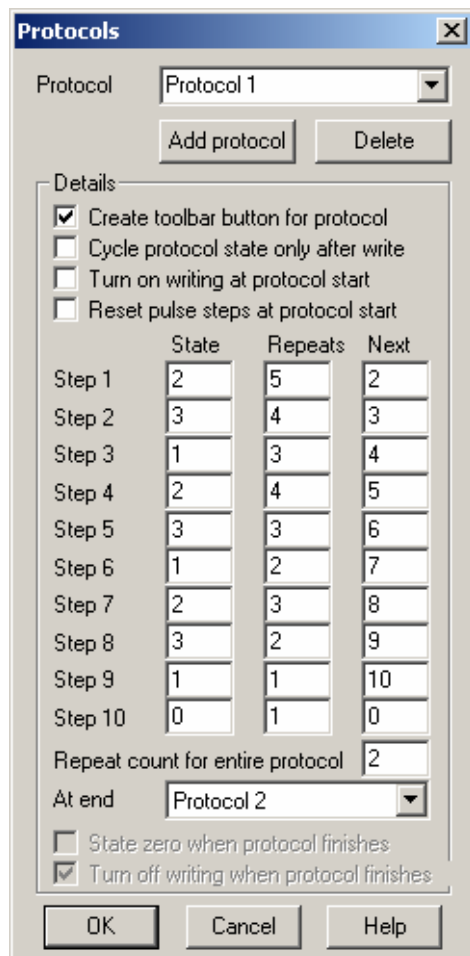
Signal

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- Q. I use multiple states in Signal to output a series of different pulse paradigms and control the ordering of these states during an experiment using protocols, but have found that only being able to specify 10 steps per protocol is not enough for me. I am told that you can create multiple protocols for control of state ordering but these then have to be selected by hand during an experiment from the drop-down list in the states toolbar. Is there any way to automate the running of these protocols during an experiment?



- A. The ordering of multiple states in Signal during an experiment can be controlled manually from the states toolbar, set to run in a numeric or random order, or controlled by protocols, where the user specifies the order and number of repeats for the multiple states when sampling. The latest version of Signal includes enhancements to the protocol dialog that make it easier to setup multiple protocols and allow the user to link them to run sequentially during an experiment. There are also new options for creating toolbar buttons for protocols and controlling the number of protocol repeats.



Enhanced protocol dialog in Signal

Scripts: Spike2 

- Q. I am recording multimedia files alongside neuronal response data. During periods of low response activity, I am making use of the slow frame rate feature in the Spike2 video application to keep my file sizes manageable. Is there any way to automatically switch to the slow frame rate when activity drops below a certain level on the specified channel?
- A. The attached script, `VideoRate.s2s`, can be used to monitor an event or WaveMark channel and switch between slow frame rate and the normal frame rate depending on the level of activity in the nominated channel. You can specify the minimum interval between events that signals the start of a period of low activity.

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Right-click the script icon and save to disk.

If you have any problems opening the embedded scripts in this newsletter please let us know.

Scripts: Signal 

- Q. I would like to perform a sequential method of leak subtraction that doesn't seem to be supported by the leak subtraction option in the Analysis menu. In my example I have 30 frames: the first 15 recorded using a control solution, with the next 15 in a blocker solution. What I would like is for the second set of frames to be subtracted from the first set of frames in sequence, i.e. frame 16 subtracted from frame 1, frame 17 subtracted from frame 2... etc.
- A. The attached script, `SubFrameSeries.sgs`, allows you to subtract one series of frames from another. The script expects a standard voltage clamp setup, i.e. one channel holding the stimulus and one channel holding the response data and

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then lets the user enter a series of destination frames (the ones to subtract data from) and a series of source frames (the ones to subtract). You can enter lists of frames in the normal format for example, 1,2,5 or 1..15, as used in most dialogs.

Did you know...?

The channel process dialog in the latest version of Spike2 now allows you to copy a set of applied processes to all selected channels in a data file.

Recent questions

- Q. I am recording EMG data for force feedback using Spike2 and would like to know if there is any way to have the incoming data displayed in the centre of the x-axis time range during a recording. This is important for me as it is necessary for the subject to be able to see 'ahead' of the current time to clearly know when to start responding. I am asking the subject to follow a shape drawn on the screen.
- A. The attached example script, `SampleWindow.s2s`, utilises an idle routine to display the incoming data in the middle of the X-axis time range. The user can specify the length of the displayed time range before sampling. Although the script works well when displaying a few channels at relatively low sample rates, such as EMG recordings, the smoothness of the scrolling display will be affected by an increase in the number of channels and the sample rate. The exact effects will depend on your PC's hardware configuration and graphics capabilities.

User group

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