CED eNews
The eNewsletter from Cambridge Electronic Design

Contents

News

Back to top

The CED Forum is now live!

Our website now includes a user forum and bulletin board section where registered members can post questions about software and hardware for the CED team, suggestions for future products and software revisions and browse generally useful information posted by ourselves and other CED users.

You can browse the forum as a guest but to submit posts you need to register as a member here. We have tried to make the registration process as simple as possible while providing protection against spamming and only require the bare minimum of information (email addresses will be kept strictly private, of course).

Meetings and events

FENS (6th Forum of European Neuroscience)
Palexpo Conference Center
Geneva, Switzerland
July 13th – 16th 2008

Physiological Society Main Meeting
University of Cambridge
Cambridge, UK
July 13th – 16th 2008

5th Symposium for Chinese Neuroscientists Worldwide
Changsha City
Hunan Province, China
July 25th – August 1st 2008

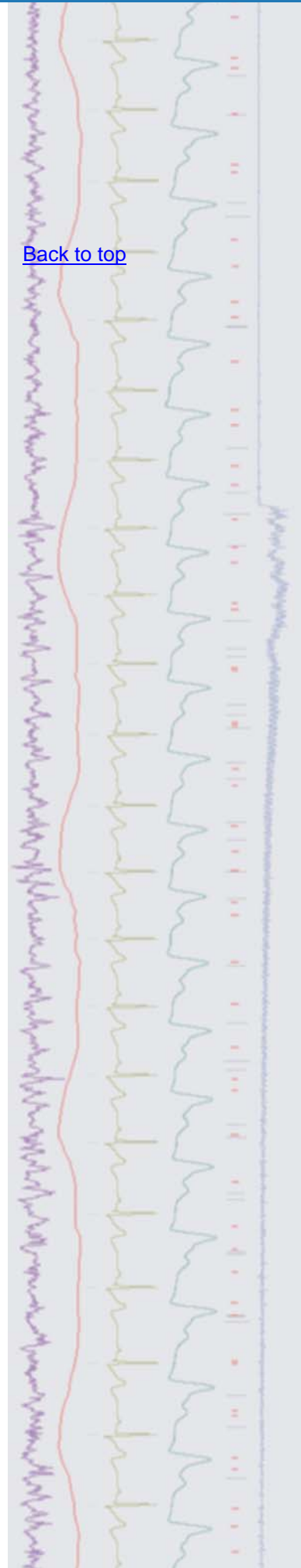**Scandinavian Physiological Society Annual Meeting**
University of Oulu
Oulu, Finland
August 15th – 17th 2008

Latest versions of Spike2 and Signal

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.
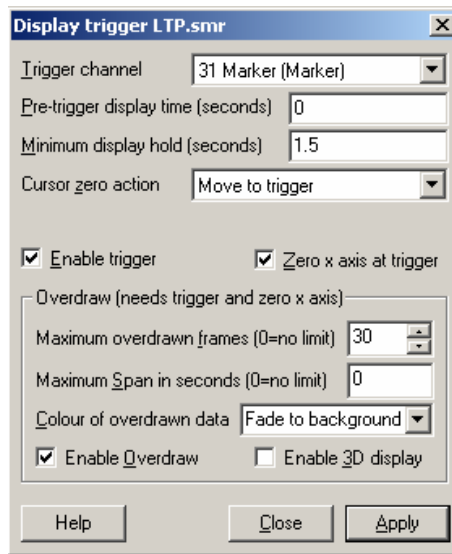
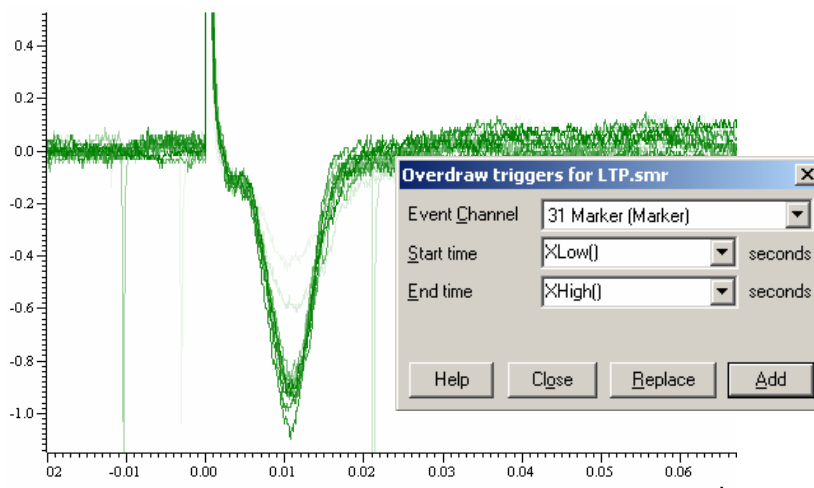| Spike2 downloads	Signal downloads
Spike2 version 6.09	Signal version 4.02
Spike2 version 5.20	Signal version 3.10
Spike2 demo	Signal demo

Q.   Is there any way to generate a display of overdrawn data sections from a Spike2 file without using a script?

A.   From Spike2 version 6.09 onwards you can overdraw time view data on and off-line to compare responses to stimuli and optionally show these overdrawn sections in 3D as a 'waterfall' type display. As overdraw is only a display mode, all measurements and cursor positions will behave as if the overdrawn data is not present. Overdraw mode is available from the Display Trigger dialog, which can be found in the Spike2 View menu Trigger/Overdraw function.

The Display Trigger provides an oscilloscope-type display of time view data with an optional pre-trigger time. It runs as a paged display or updates in response to events on a trigger channel. Pre-trigger and minimum hold display times can be set from the dialog, as well as options for Cursor 0 behaviour. For an example of using the display trigger, see eNewsletter #2.
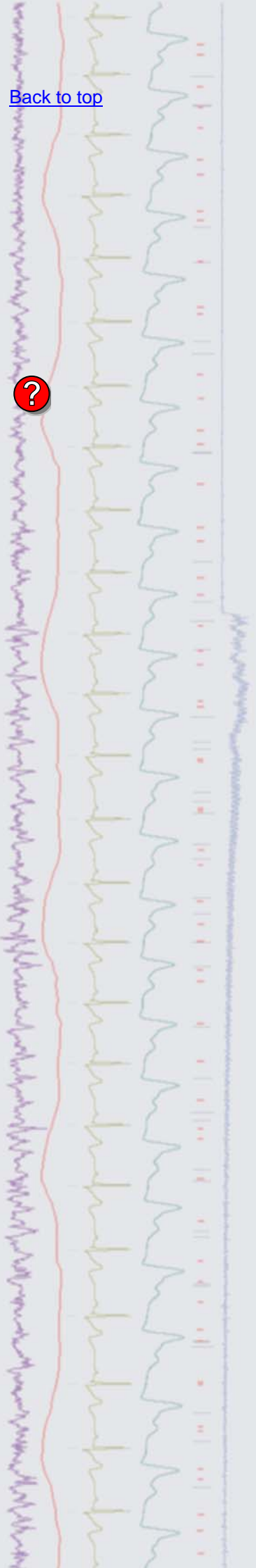

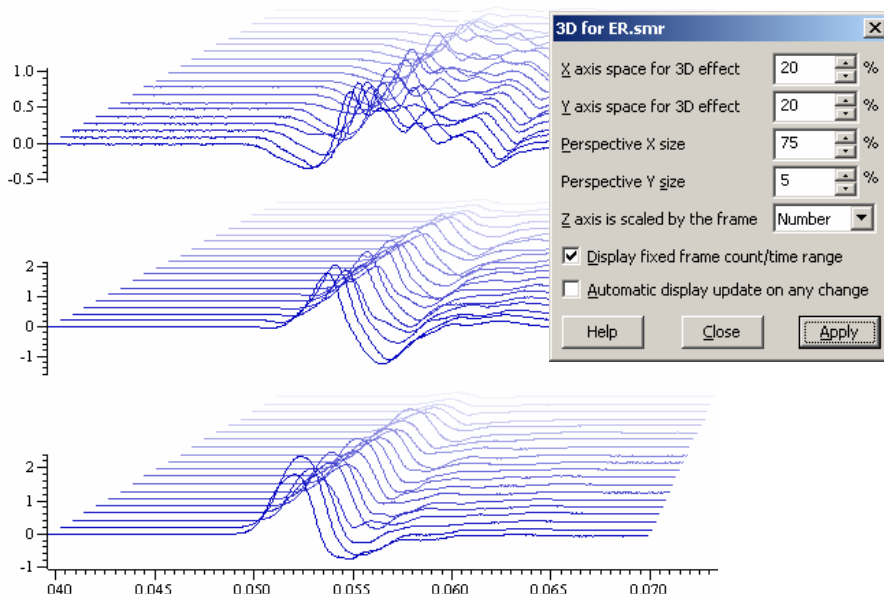*Display trigger dialog with overdraw enabled*

To enable the overdraw section of the dialog, both the Enable trigger and Zero x axis at trigger options must be checked. With Enable overdraw selected, data sections are drawn over each other in time order according to the selected triggers, with the newest section of data, or *frame*, at the front of the display. There are options for limiting the number of frames displayed and the time span of the frame sections as well as settings to determine the colouring of overdrawn frame data. Trigger times can be also added to the display using the Overdraw List dialog.

LTP data shown in overdraw triggered display mode

The Enable 3D display option draws each frame of data with a vertical and horizontal offset to give a waterfall display effect. The screen arrangement for the channels and frames can be controlled from the associated Overdraw 3D dialog.
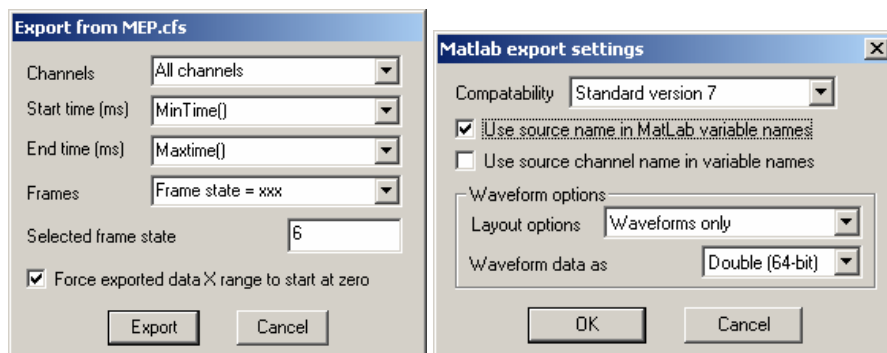

3D overdrawn data on multiple channels with displayed 3D settings

Full details of the overdraw mode can be found in the Spike2 on-line help.

Signal

Q.   Is it possible to export data from Signal to MATLAB compatible files?

A.   You can export data files and XY view data to MATLAB from the Export as… function in the Signal File menu. You must select the MATLAB support option during the Signal 4.02 installation to enable this feature. This can be done by reinstalling the software if you have not previously selected this option.

Associated dialogs allow you to select the channels, frames and time range to export as well as the required compatibility and data options for the .mat file created.

Export dialog settings for Signal data

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

Scripts: Spike2

Q.   Is it possible to get information from a sampling configuration as a text file? Something like a report file holding information such as number and type of channels, sample rates and any associated 1902 settings, for example?

A.   The attached script, PrintMyConfig.s2s, prints information stored in the current sampling configuration to a text file. The script creates a dialog from

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.

which you can select the components of the sampling configuration that you want to include in the printed report.

This script requires that you have a 1401 connected and switched on, as it needs to generate a data file in order to retrieve the information from the current configuration.
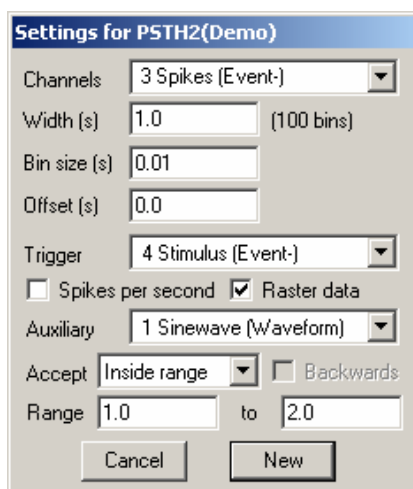
Scripts: Signal

Q.   I have a series of data files imported from an in-house recording system that I would like to analyse. The problem I have is that our in-house system stores data in columns, which when opened in Signal shows a single frame with multiple channels. I would like each channel to be displayed as an individual frame in Signal. Is there any way to do this?

A.   The attached script, `ChansIntoFrames.sgs`, will create a new multiple frame file, with each channel from the selected source file assigned to a separate frame of data.

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.

Did you know…?

When importing WAV files to Spike2, the data file is no longer limited to use an integer multiple of microseconds as the timebase. The importer now reads the WAV file header and creates a data file at exactly the same sample rate as set in the original WAV file.

Recent questions

Q.   I would like to setup a PSTH result view where data is only included if the value on a waveform channel (a sine wave which is proportional to a stimulus I delivered in the experiment) is within a given voltage range.

A.   You can set up a PSTH to only include sweeps of data that occur when a waveform channel is within a range of values by using the auxiliary measurements option in the PSTH dialog. Set the Auxiliary channel to be the waveform channel you want to monitor, set the Accept field to Inside range and then the Range fields to the start and end values that meet your criteria. Each sweep that occurs is then only added to the result if it matches the values set.

Settings for PSTH with auxiliary channel setup

User group

If you have any comments about the newsletter format and content, or wish to un-subscribe from the mailing list for this newsletter, please notify sales@ced.co.uk.

All Trademarks are acknowledged to be the Trademarks of the registered holders.