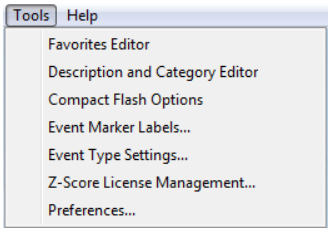
New Features

BioGraph Infiniti version 6.0

Overall Improvements

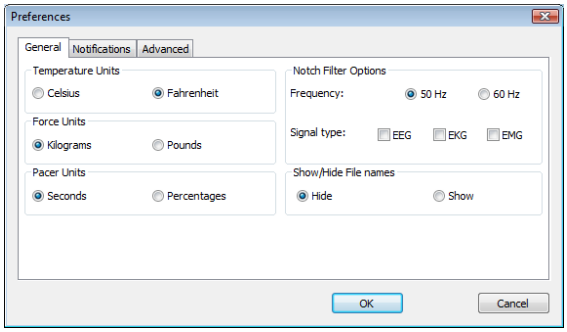
Easier to Use

Overhauled user interface streamlines usage flow



BioGraph's menus were reorganized to group functionality in logical sets. Many dialog boxes were simplified and the flow of a number of functional sequences (start session, review sessions, export data, etc) was streamlined to minimize mouse clicks and facilitate user decisions. A new Preferences dialog box centralises all your global settings.

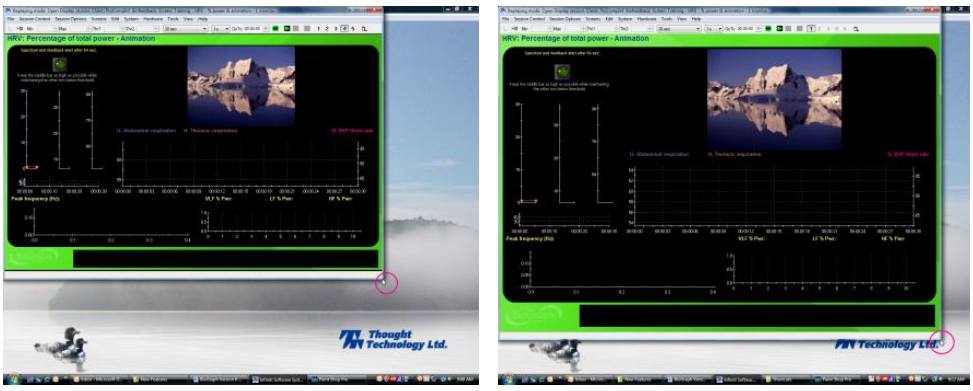
Regional settings and preferences improve customization



A number of default settings, including notch filter frequency, default temperature units (^{o}F or ^{o}C) and page size format (Letter or A4) are defined automatically when BioGraph runs for the first time. Other settings, such as text file format (ANSI or Unicode), DVD codec and recording mode can be made and modified from the new Preferences dialog box.

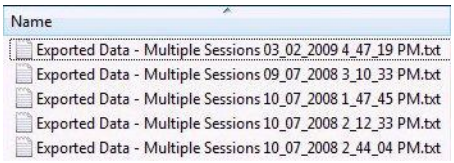
Easy screen resize function fits all monitors

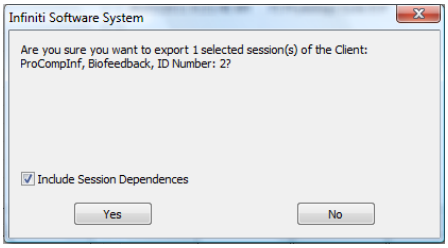
Because computer monitors come in all sizes and resolutions, we have modified BioGraph's screen management capabilities to allow users to resize a screen on the fly. BioGraph then saves the screen's new size, so it is ready to run for the next session.



New tools and functions help you work better

Many new productivity tools were implemented to help users perform a number of basic tasks, such as exporting data from multiple sessions, packaging all media files related to a selected session, editing the description and category of selected Screens, Scripts of Favorites and even mapping a screen's instrument connections.





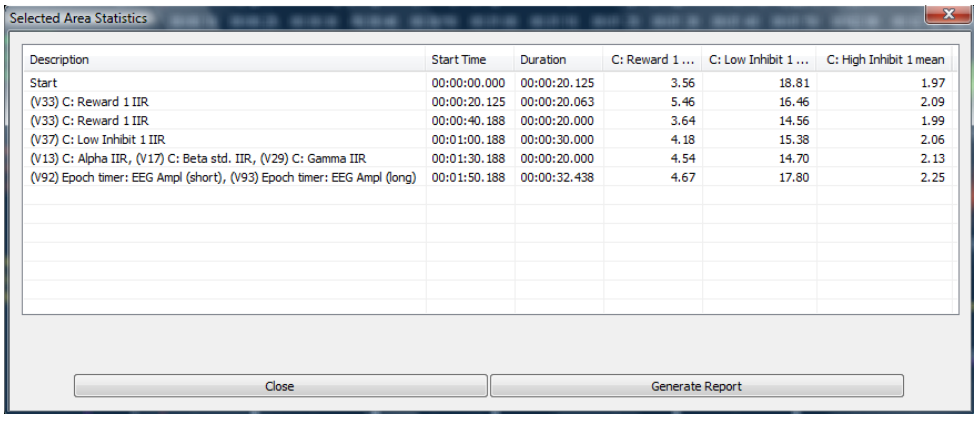
Redesigned sound feedback functions never miss a beat

BioGraph's sound feedback functions were given a complete redesign. Instead of using the sometimes unreliable, Windows-based, sound control functions, our programmers have integrated a new, professional class sound engine commonly used by top video game developers. This new tool is now the driving force under all of BioGraph's audio feedback features.

Introduces Powerful New Review Capabilities

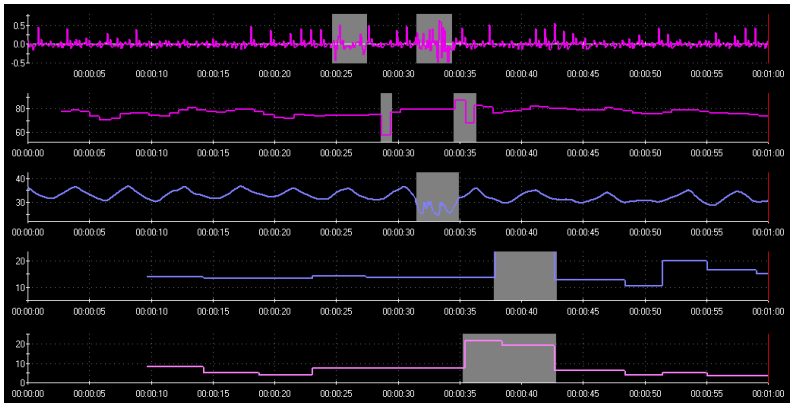
Multi-settings mode increases reporting accuracy

To better reflect what happened during a session when you are reviewing data, BioGraph now keeps track of each and every modification you make to the channel set settings (filter cut-off frequencies, averaging coefficients, etc) from the beginning to the end of a session. You can then generate statistics for each period between changes.



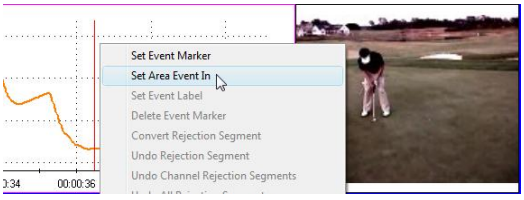
Redesigned artifact rejection method facilitates analysis

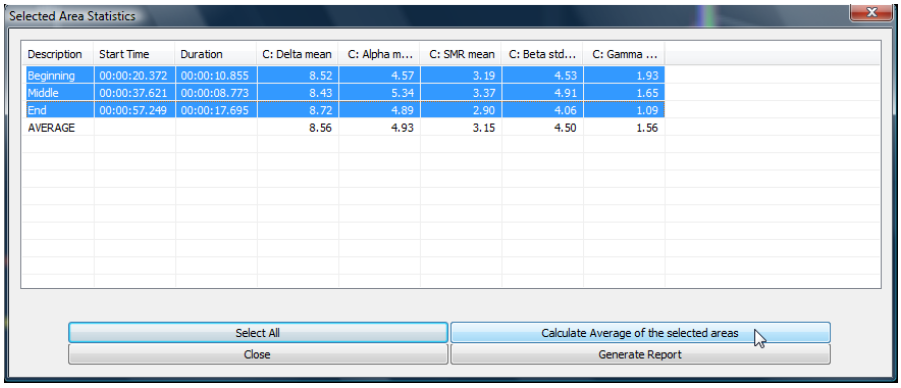
BioGraph's artifact rejection functions were redesigned to be signal-specific -- as opposed to global to all signals. This allows for easier data cleaning and prevents the occurrence of secondary artifacts that can be caused by rejection segments on other channels in a global rejection scheme.



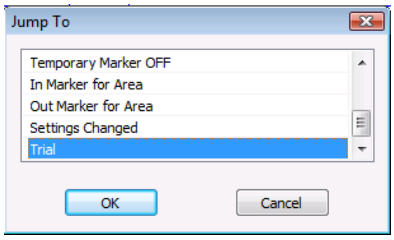
Session segmentation improves open session processing

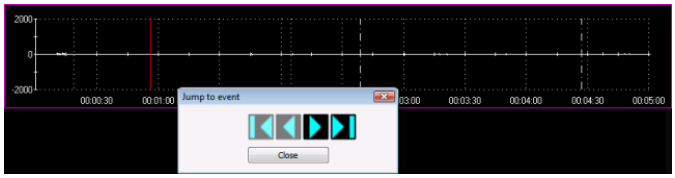
When reviewing a saved Open Display session you can tag the beginning and end of selected sections of the recording in order to analyse them individually. When generating statistics, BioGraph then processes each section separately as if the session had been a script session. The Session Report can also include averaged statistics for all the defined areas.





New jump to marker function helps you locate key events



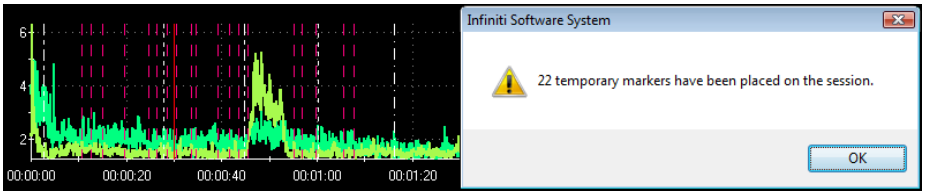


When reviewing a session you can click the Jump button to automatically move the time mark to any user event or session marker.

This is particularly useful when reviewing sessions with slow cortical or evoked potential data because you can easily visualize each event and its effect on the averaged trace prior to rejecting an artefact.

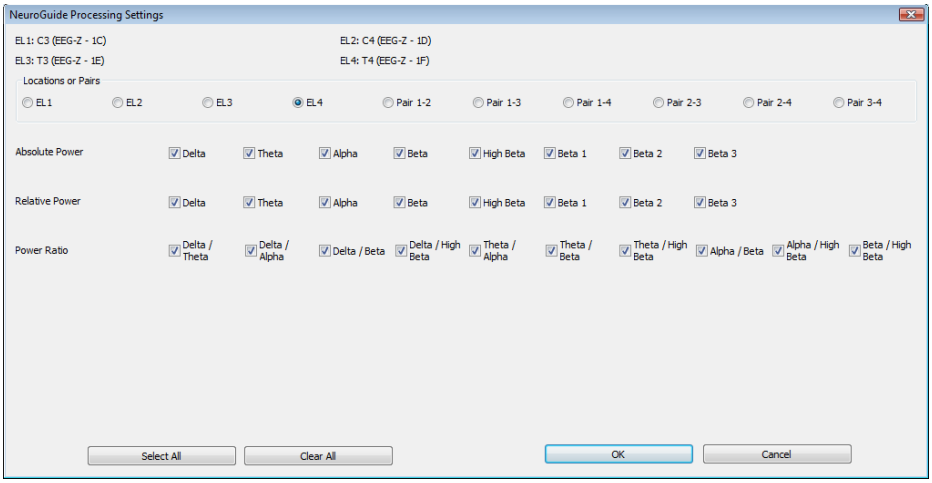
Temporary markers search data for specified conditions

If your channel set includes a Boolean channel which defines a specific condition, such as “Left EMG greater than Right EMG”, you can ask BioGraph to search throughout the session and place a marker each time this condition occurs. BioGraph can automatically mark when the condition starts and or stops with different colors.



New interface increases control over the Z-Score index

The Z-Score Index calculation settings were modified to allow you to include or exclude each and every Z-Score metric item. For each electrode and pair of electrodes, you can easily review the metrics that are included in the percentage calculation and either click individual metrics or “Select All”.



New Features for Developers

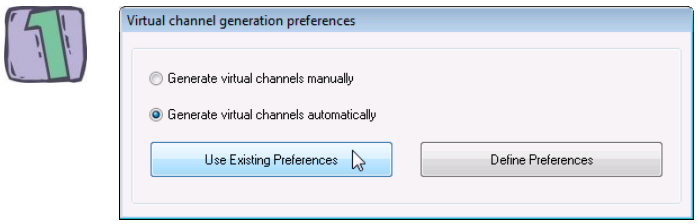
Infiniti Developer Tools version 6.0

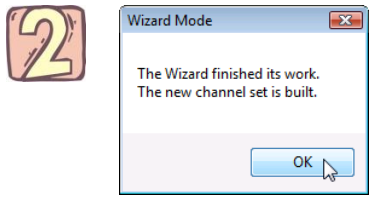
Channel Set Editor

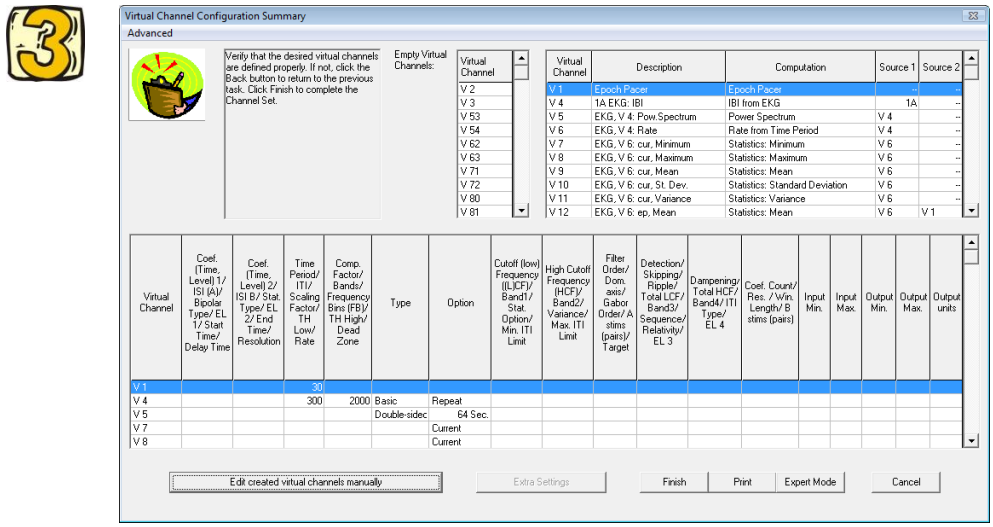
Speed up your work and expand your capabilities

New channel set Wizard, easy as 1, 2, 3

Creating a new channel set using the Channel Editor is one of BioGraph Infiniti's most challenging tasks. Version 6.0 expands to Channel Set Wizard's powers with the capability of generating channel sets automatically, with just a few clicks of the mouse. Expert users can also create templates, based on personal preferences, and tell the Wizard to use custom templates instead of the default settings.





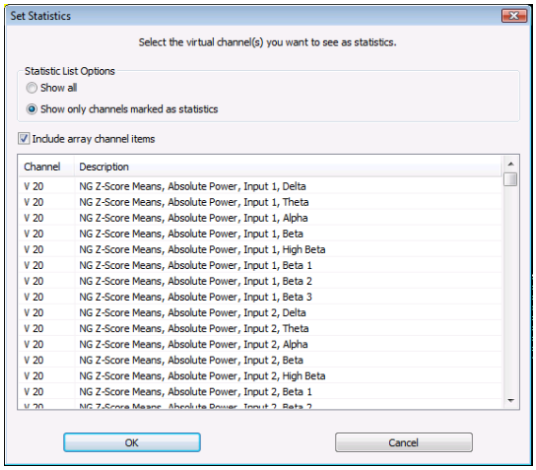


New device interface inputs blood pressure readings

BioGraph can now monitor your client's Blood Pressure before, during and after training by communicating with the AND PC Blood Pressure monitoring unit (model UA767PC).

A blood pressure reading can be triggered manually, by pressing a key on the keyboard or automatically when recording a script session. For each reading, BioGraph stores the systolic and diastolic measures, as well as the time of the measure and the heart rate as calculated by the device.

New computation generates statistics on all Z-Scores metrics

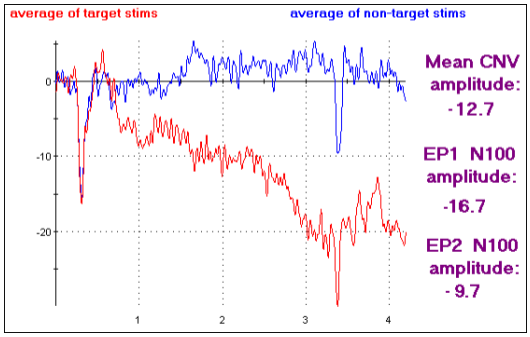


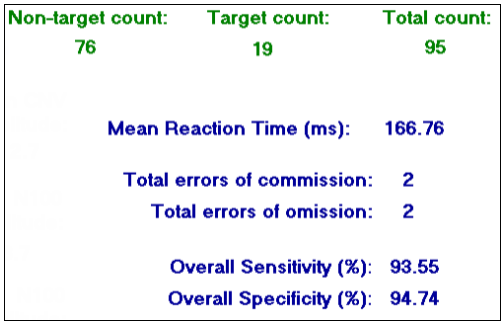
A new channel set algorithm was implemented to calculate a user-selected statistic on all items in a NeuroGuide Z-Score channel. The computation can be performed for the whole session or on an epoch by epoch basis.

Connect this channel to a NeuroGuide Z-Score instrument to see all statistics at once. The statistics can also be included in a session report, exported to text files and used in a trend report.

New functions improve reaction time and slow cortical potential processing

The Evoked Potential and Reaction Time Processing functions were improved to provide more information in real-time or post session analysis. The Channel Set Editor includes new algorithms for calculating extended statistics on evoked and slow cortical potentials as well as maintaining reaction time and error statistics for Go/NoGo tasks.

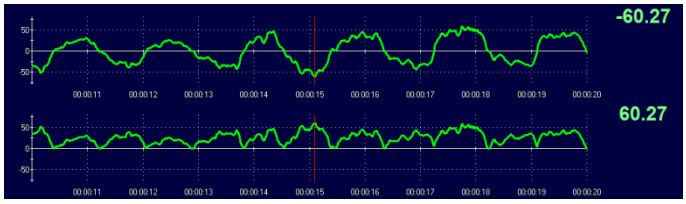




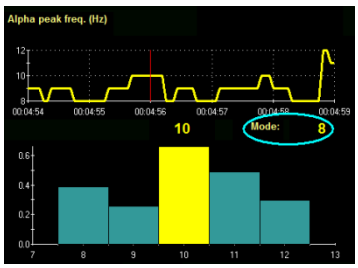
New algorithms expand your horizons

A number of new algorithms were added to BioGraph's ever growing library. These include mode, absolute value, RSA phase, difference between consecutive IBI values and many more.

Absolute value:

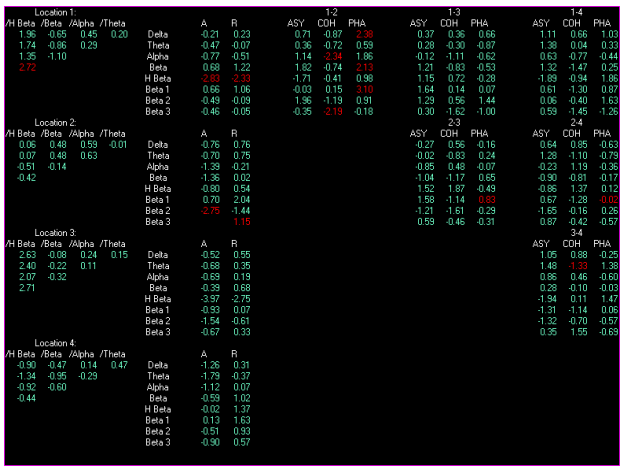


Mode:



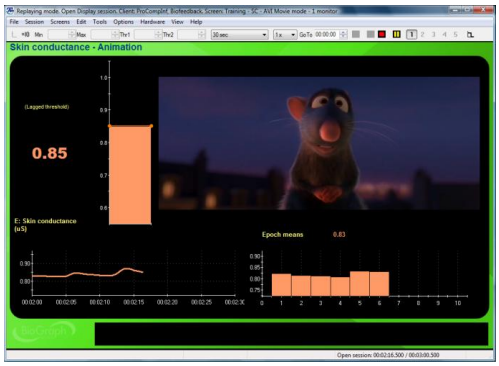
Screen Editor

New Z-Score tool gives you more control



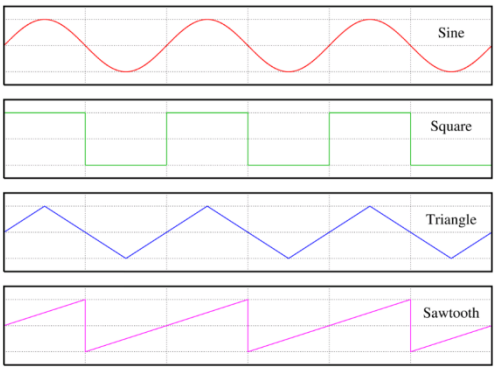
A new screen instrument allows you to visualize all NeuroGuide Z-Score metrics, for 2 or 4 channels, on a single screen. The instrument's low and high thresholds can be adjusted on the fly and you can specify different colors for metrics that are inside and outside the thresholds.

New animation mode plays video with sound



The AVI instrument has a new function to play recorded video with sound. In this new mode, you can play/pause movies that were saved to the AVI format.

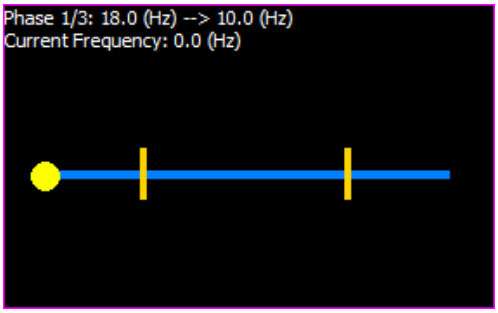
New sound feedback option generates audio on the fly



A new audio feedback option lets you create screens which emulate classic biofeedback devices by generating simple tones on the fly. Waveforms include sine, square, triangle and sawtooth.

You can also define a start and end pitch to create proportional and inverse proportional feedback.

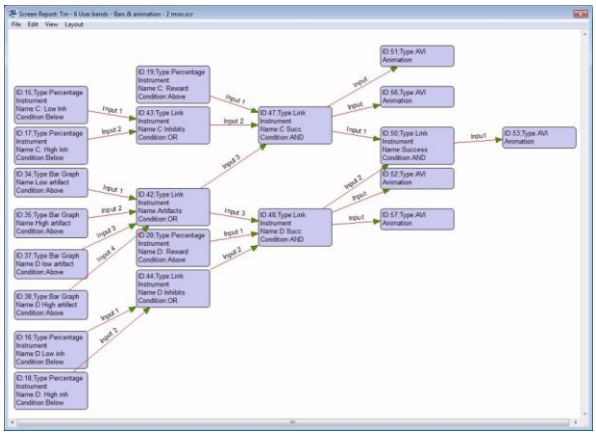
Combine biofeedback with audio entrainment



A new Binaural Beat Pacer Instrument allows you to program audio entrainment sessions in either one of two modes. In the Dynamic mode, the pacer leads your client from a starting frequency down to a target frequency, suitable for relaxation, and then leads him back to the starting frequency.

In the Adaptive mode, the pacer determines the starting frequency automatically and leads the client towards the target frequency, using the client's own dominant EEG frequency to verify that he is following the entrainment, and adjusting its pacing rate accordingly.

Double-check your work with a quick view of a screen's logical connections

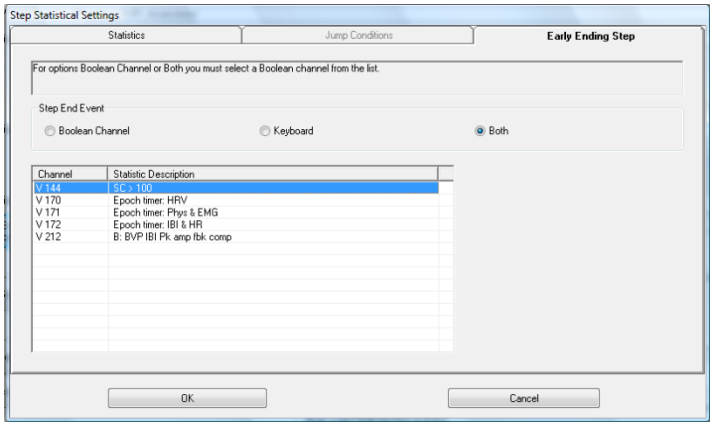


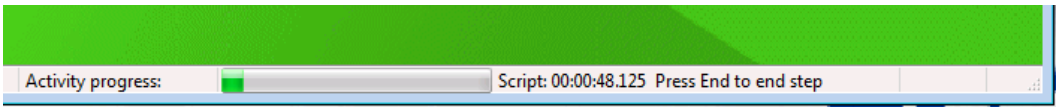
The Screen editor has a new function which allows you to get an overview of a screen's logical connections. This allows you to check that everything is linked properly and what conditions drive the feedback.

Script Editor

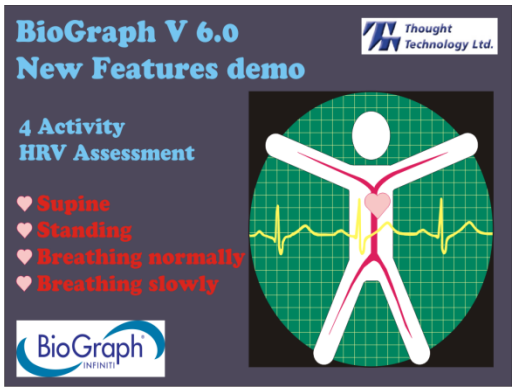
New conditional end of step increases flexibility

Script Control functions were improved to allow the early ending of a script step. A new setting was added to the Step configuration options in the Script editor to enable this feature. You can now create scripts with steps of a specified default duration which the script user may terminate before their normal end by pressing a key on the keyboard or stepping on a foot pedal.





Script intro image feature shows instructions



Screen designers can instruct BioGraph to load an introduction image that will be shown at the beginning of a script, before the clinician clicks the Start button. This is an innovative and practical way to give information on what to expect when the script is running.