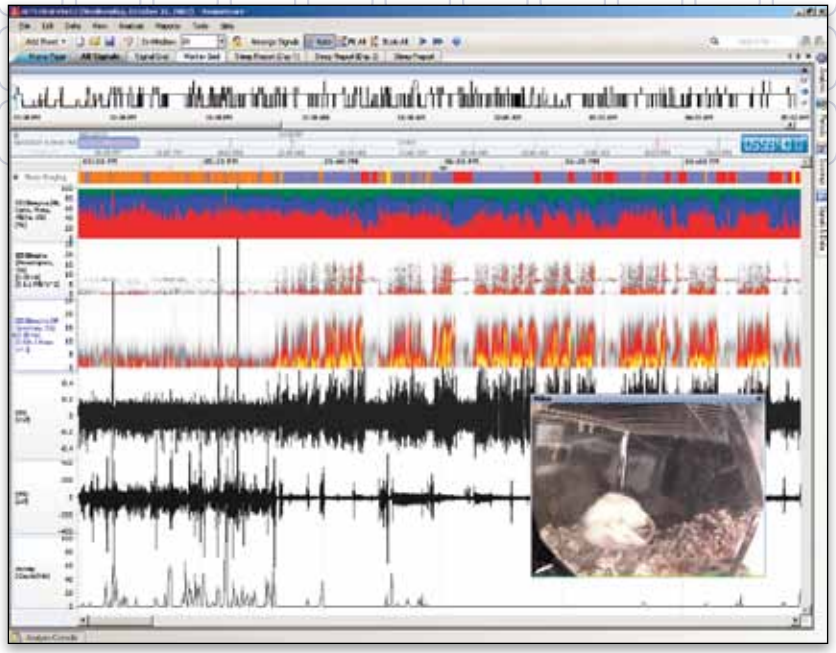
NeuroScore

NeuroScore™ CNS Data Analysis Software

The power to process more data in less time.



DSI™

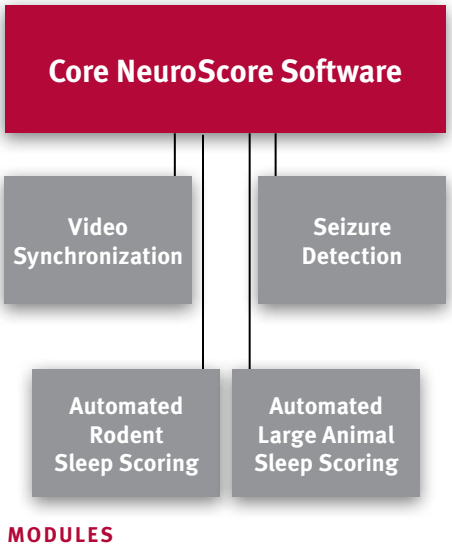
So much power and so simple to use.

NeuroScore™ is DSI's analysis software platform specifically designed for large continuous data sets like those obtained during acute and chronic nervous system studies. Using the latest technology, NeuroScore offers user flexibility along with unsurpassed speed and processing power, enabling users to efficiently analyze chronic data sets common with sleep and seizure studies. Load data, analyze, and summarize results in a matter of minutes using automated scoring modules, advance frequency analysis and report templates. NeuroScore can read data files in Dataquest A.R.T., Ponemah, and EDF formats.

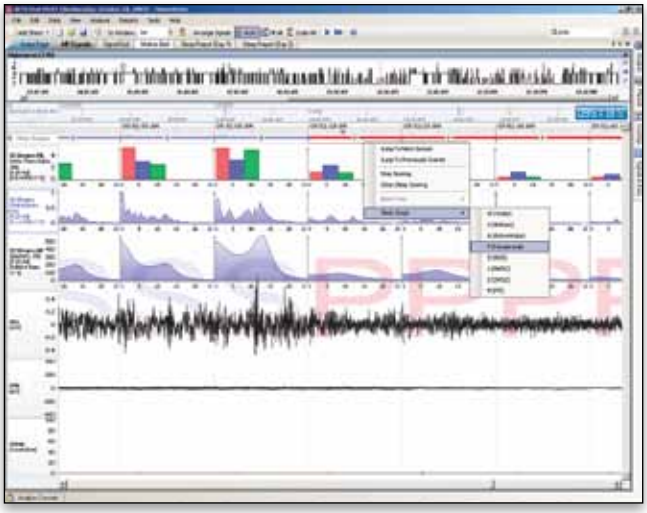
Core Software

NeuroScore's core software is the foundation of the analysis platform; it can be used independently or with any combination of the add-on modules. Key components of the core software include:

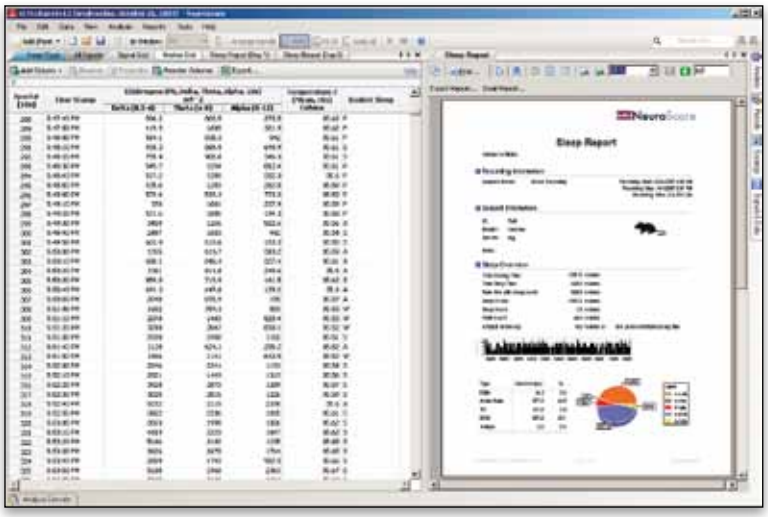
- Sophisticated graphical displays: Effortless viewing and browsing of various time ranges and segmenting of data into intervals. Search for specific times or events within the entire recording.
- Derived signals: Easily apply frequency analysis tools, statistics, and filters to the signals and display the results graphically or numerically.
- Manual scoring: Efficiently identify and mark user-defined events or sleep stages.
- Signal & Marker Grids: Display data and derived signals numerically with a high level of power and flexibility. Grids can be exported to Excel and other formats for further processing.
- Reports: Summarize results quickly and consistently using pre-defined or custom report templates.
- Amplitude and EMG activity detectors: Accurately execute an automated protocol that identifies regions of data meeting user-defined thresholds. Use the amplitude detector with any data type.



NeuroScore, the latest in CNS Analysis and Reporting.

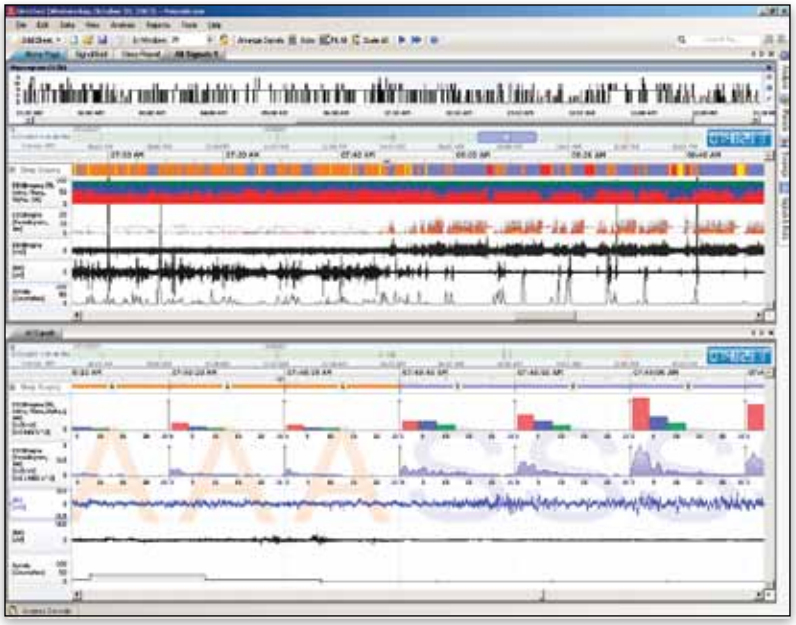


Analysis window showing rat EEG, EMG, and activity waveforms as well as derived signals from the EEG signal, including the AR spectrum, periodogram, and power bands (delta, theta, alpha). Manual sleep stages are being assigned to each 10-second epoch and the resulting hypnogram is displayed.



Signal grid (left) displaying the EEG periodogram power band values for each 10-second epoch. The EMG RMS value and assigned sleep stage columns are also included. A Sleep Report (right) template was generated to summarize the scoring results for the subject.

Optional Modules



Automated Rodent Sleep Scoring

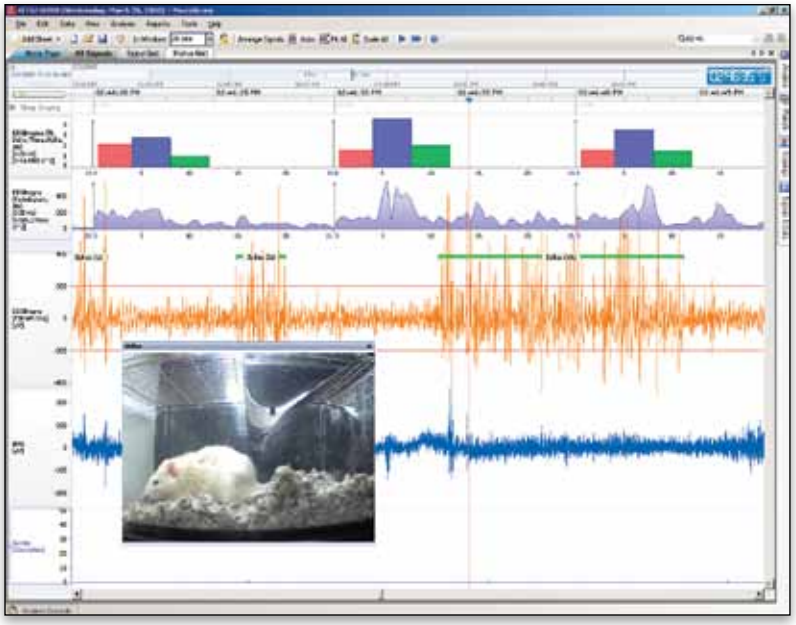
This module automatically assigns a vigilance stage to each epoch based on EEG, EMG, and activity data. Stages include Paradoxical Sleep, Slow Wave Sleep (with option to distinguish between SWS-1 and SWS-2), Wake, and Active Wake. The frequency content of the EEG and the presence of muscle activity and movement are used as the basis of the scoring criteria. Automated scoring takes a few minutes or less for each 24 hour data set, and can dramatically reduce analysis time and variability in comparison to manual scoring.

Automated Large Animal Sleep Scoring

This module automatically assigns a vigilance stage to epochs of large animal data. The algorithm is based upon the AASM standards for human sleep scoring and relies on EEG, EMG, EOG, and activity data from each subject. Stages assigned include REM, Non-REM (N1, N2, N3), Wake, and Active Wake.

Seizure Detection

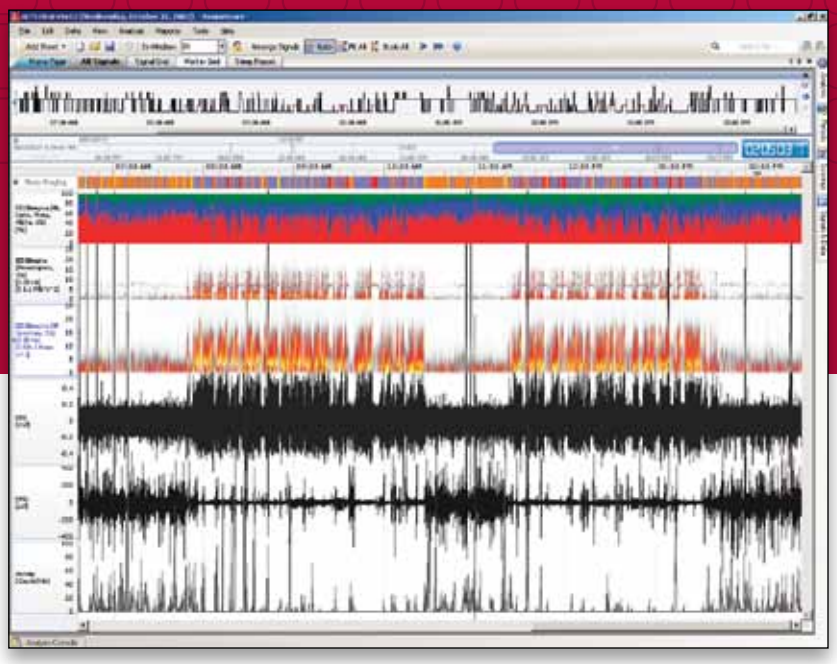
The spike train detector is designed primarily for seizure detection from EEG waveforms. The detector scans the waveform for repeating spike activity using amplitude-based criteria. Events are visually displayed within the waveform allowing for manual editing and confirmation. Several parameters including the spike train duration and number of spikes can be displayed per event or summarized over longer time intervals.



Video Synchronization

This module imports video data acquired with either Dataquest A.R.T. or Ponemah and synchronizes it with the physiologic waveforms, allowing playback in real-time or fast speed. View the subjects' behavior to validate or further classify detected events or scored vigilance stages. Incorporating video data can improve the confidence level of your results.

To learn more, talk to a DSI representative
at 1-800-262-9687 (U.S.A./Canada)
1-651-481-7400 (worldwide)
or visit www.datasci.com



Please contact your DSI Representative for a demonstration or trial version of NeuroScore™.

NeuroScore was developed exclusively for DSI by Signal One.

DSI™

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