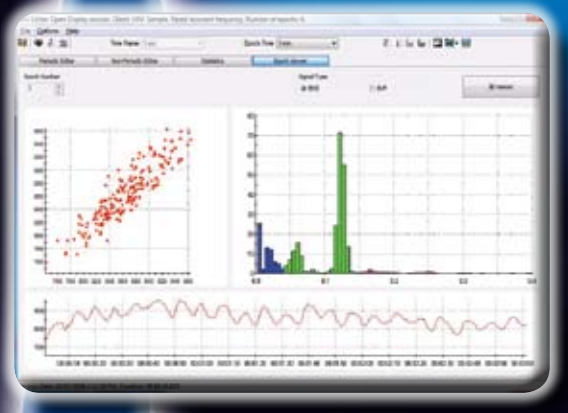
CardioPro™ INFINITI

HRV Analysis Module

CONNECTING HEART & HEALTH™



CARDIOPRO™ INFINITI

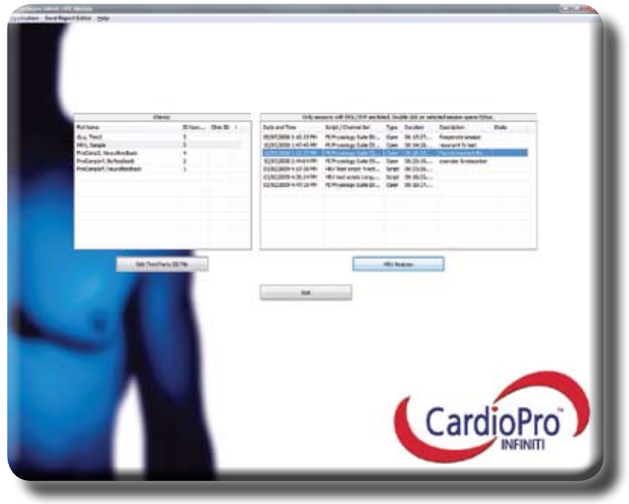
HRV ANALYSIS MODULE

Contrary to the common belief, a healthy heart doesn't beat regularly as a metronome. In fact, the heart's moment by moment beating rate is naturally influenced by many physiological factors and varies constantly.

One important factor defining a person's level of health is the range defined by the minimum to maximum heart rate capacity. As one's physical condition deteriorates, this range can become narrowed to the point of limiting that person's ability to adapt to the stresses of daily life.

Heart rate variability (HRV) Analysis is a powerful tool which provides clinicians and researchers with an in-depth view of the cardiovascular system's adaptive capabilities.

CardioPro Infiniti is a specialized off-line analysis module which brings advanced heart rate variability (HRV) analysis capabilities to the BioGraph Infiniti platform. It complements any physiological biofeedback suite (such as the Physiology suite) by providing sophisticated data analysis methods that were only previously available in very specialized software packages such as Thought Technology's CardioPro software.



EASY ACCESS TO BIOGRAPH SESSIONS

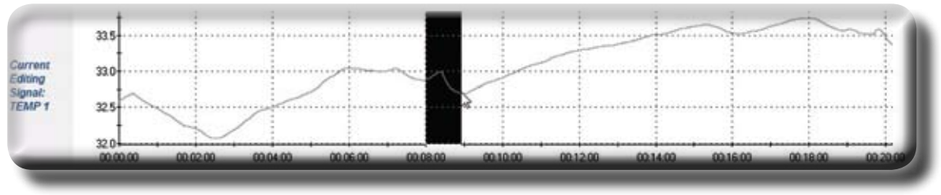
The module accesses BioGraph Infiniti's client database directly and is capable of processing open display and script sessions that were recorded with either an electrocardiograph (EKG) or blood volume pulse (BVP) sensor to generate session specific statistical analysis. (The module is also compatible with Thought Technology's specialized EKG receiver for the T31 Transmitter belts™ from Polar™.)

EASY NORMALIZING OF IBI DATA

The module provides advanced tools for normalizing and analysing inter-beat interval (IBI) data. The statistical analyses follow the guidelines published in 1996 by the HRV Task Force. A powerful IBI editor offers both automatic and manual normalization functions to help you rapidly remove artifacts caused by extra beats, missed beats or premature atrial/ventricular contractions (PAC or PVC) using three standard operations, ADD, SPLIT and AVERAGE.

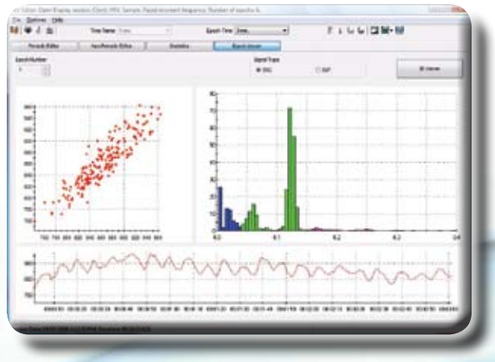
EASY ANALYSIS OF PERIPHERAL PHYSIOLOGICAL DATA

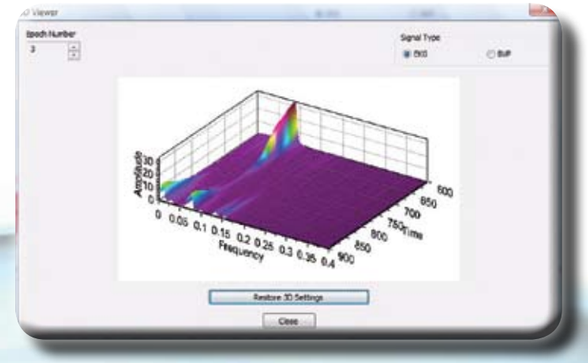
The module also provides all the editing and statistical analysis functions you need for removing artifacts from other physiological measures such as respiration, skin conductance, temperature and electromyography (EMG).

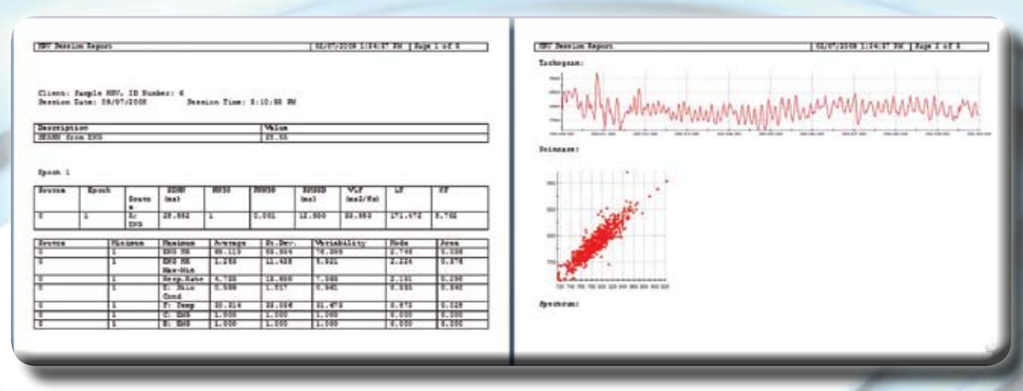


EASY REPORTING OPTIONS

Once recorded data is normalized and artifacts have been rejected, the module generates a thorough statistical analysis which you can review, prior to printing it out. The module's ability to reprocess your data with epoch durations of either 1, 3, 5 or 10 minutes adds unmatched flexibility to your analysis. The graphical analysis also provides epoch by epoch 2D and 3D power spectrum views as well as a standard tachogram and Poincaré plot. Once you are satisfied with the data analysis, you can rapidly generate reports as either Microsoft Word or Excel documents and export IBI data and statistical tables to text files.







CARDIOPRO INFINITI FEATURES

- **NO EXPORTING REQUIRED:** Cardiopro Infiniti installs over BioGraph Infiniti Version 5.1 (or later) and accesses BioGraph client files directly.
- **WORKS IN CONJUNCTION WITH YOUR EXISTING FEEDBACK SUITES:** The module can process open display and script sessions that were recorded with channel sets, screens or scripts from most suites, as long as they include EKG or BVP sensor data.
- **WORKS WITH EXPORTED IBI DATA FROM OTHER SOFTWARE:** The Cardiopro Infiniti module also performs basic editing functions on IBI data that was exported from other software packages as standard text files.
- **FOLLOWS PUBLISHED STANDARDS:** The module calculates most standard HRV metrics as recommended by the guidelines published by the Task Force of The European Society of Cardiology and The North American Society of Pacing and Electrophysiology.
- **PRODUCES A THOROUGH STATISTICAL ANALYSIS:** The statistical analyses include HRV metrics such as SDNN, SDANN, NN50, pNN50 (50 ms is the default value but the time period is user defined), RMSSD as well as the absolute or relative power for the VLF, LF and HF components of the HRV spectrum (absolute power in power spectrum or normalized units).
- **COMES WITH THOROUGH DOCUMENTATION:** As with all Thought Technology software products, the Cardiopro HRV Analysis module includes a detailed user manual (PDF).

EKG RECEIVER

The EKG Receiver is a new sensor designed by Thought Technology. It detects the heart rate of a user from the Polar™ transmitter belt that the user wears around the chest.

Polar™ transmitter belt is not provided by Thought Technology and must be purchased separately. It can be easily purchased at major department stores, sports specialty stores, and on-line.

BENEFITS:

- Wireless transmission from the transmitter to the EKG receiver, thus no electrodes are needed.
- Heart beat signal is less prone to movement or EMG artifacts, and is very stable, so you have freedom of movement.
- Polar™ transmitter belts are slim and light, easy to position on the chest, fully water resistant, and are designed for all weather conditions.

SUPPORTED ENCODERS:
FlexComp Infiniti, ProComp Infiniti, ProComp5 and ProComp2.

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