

The way we work

EEG & LTM

The way we work



**Stellate** Harmonie E



The way we work our best



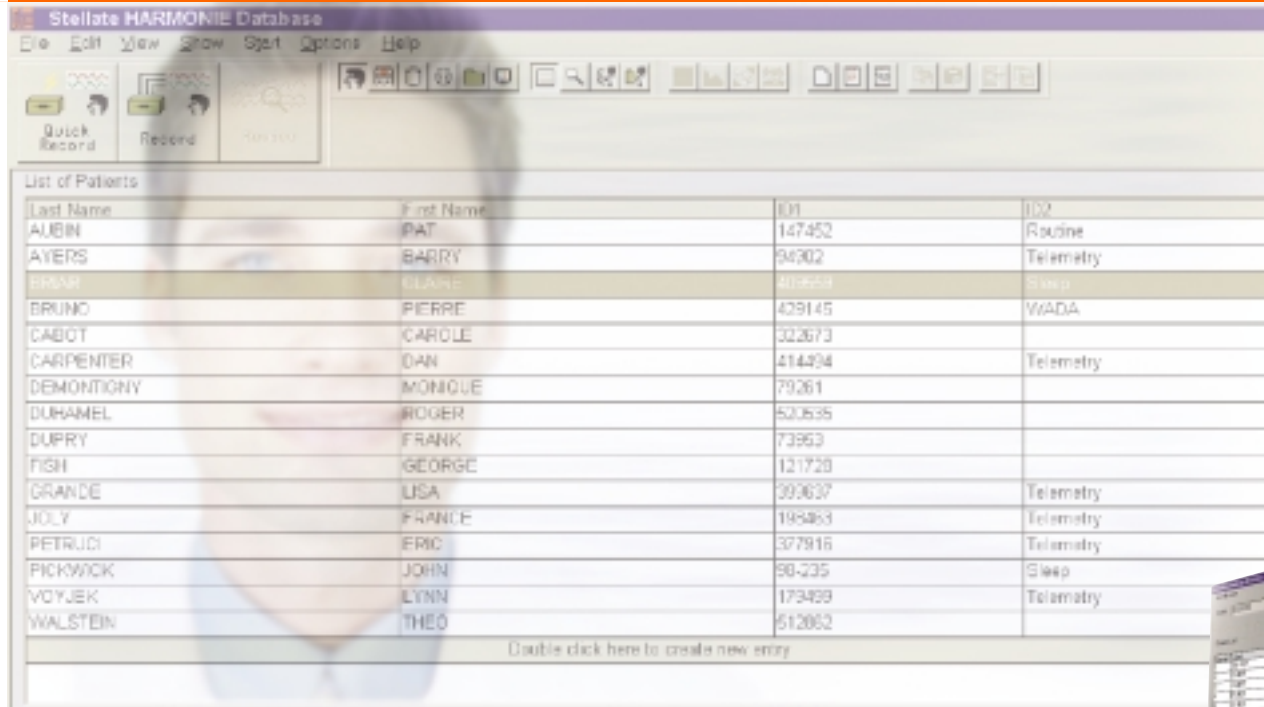
## **Stellate** Harmonie E

- Find, review and save files quickly and easily
- Generate reports instantly
- Access from anywhere by network
- Use advanced detectors for long-term monitoring and nursing station alerts
- Robust integration for reliable performance
- Better information with powerful digital video options
- Networking, engineering and training solutions
- 24/7 support by experienced professionals

EEG & LTM

## Stellate Harmonie...the way we work for clinical and research settings

Organize workflow and  
the collection, evaluation  
and archiving of data



Last Name	First Name	EM	ID2
AUBIN	PAT	147452	Routine
AYERS	BARRY	94302	Telemetry
BRUNO	CLAUDE	409454	Sleep
BRUNO	PIERRE	429145	WADA
CABOT	CAROLE	322673	
CARPENTER	DAN	414494	Telemetry
DEMONTHONY	MONIQUE	79261	
DUHAMEL	ROGER	503635	
DUPRY	FRANK	73963	
FISH	GEORGE	121728	
GRANDE	USA	393637	Telemetry
JOLY	FRANCE	195463	Telemetry
PETRUCI	ERIC	377916	Telemetry
PICKWICK	JOHN	50-235	Sleep
VOYJEK	LYNN	173489	Telemetry
WALSTEIN	THEO	512052	

Welcome to Stellate Harmonie for EEG and Long-term Monitoring (LTM). Proof positive that a neurodiagnostics lab can be designed with the health professional in mind...that digital does not mean complex and difficult to operate. Stellate Harmonie represents the well-conceived use of current technology, functionality that delivers real value to doctors and technologists and better care for patients.

Stellate Harmonie is a highly productive instrument that not only offers advanced recording and review functions...it helps organize workflow and the collection, evaluation and archiving of data. It even indicates who makes the recording and who will have to read it.

From the day you begin working with Stellate Harmonie, it automatically keeps track of every patient entering the lab, every recording you make and every report you generate... and you can access any report quickly and easily, directly, or from any station on the network. A centralized database and powerful search capabilities make it possible.

Stellate Harmonie is much more than an instrument for neuromonitoring; it is the framework for the total management of your neurodiagnostics lab. And, it is proof that well-applied technology can deliver great value.





## **One system manages all your neurodiagnostics**

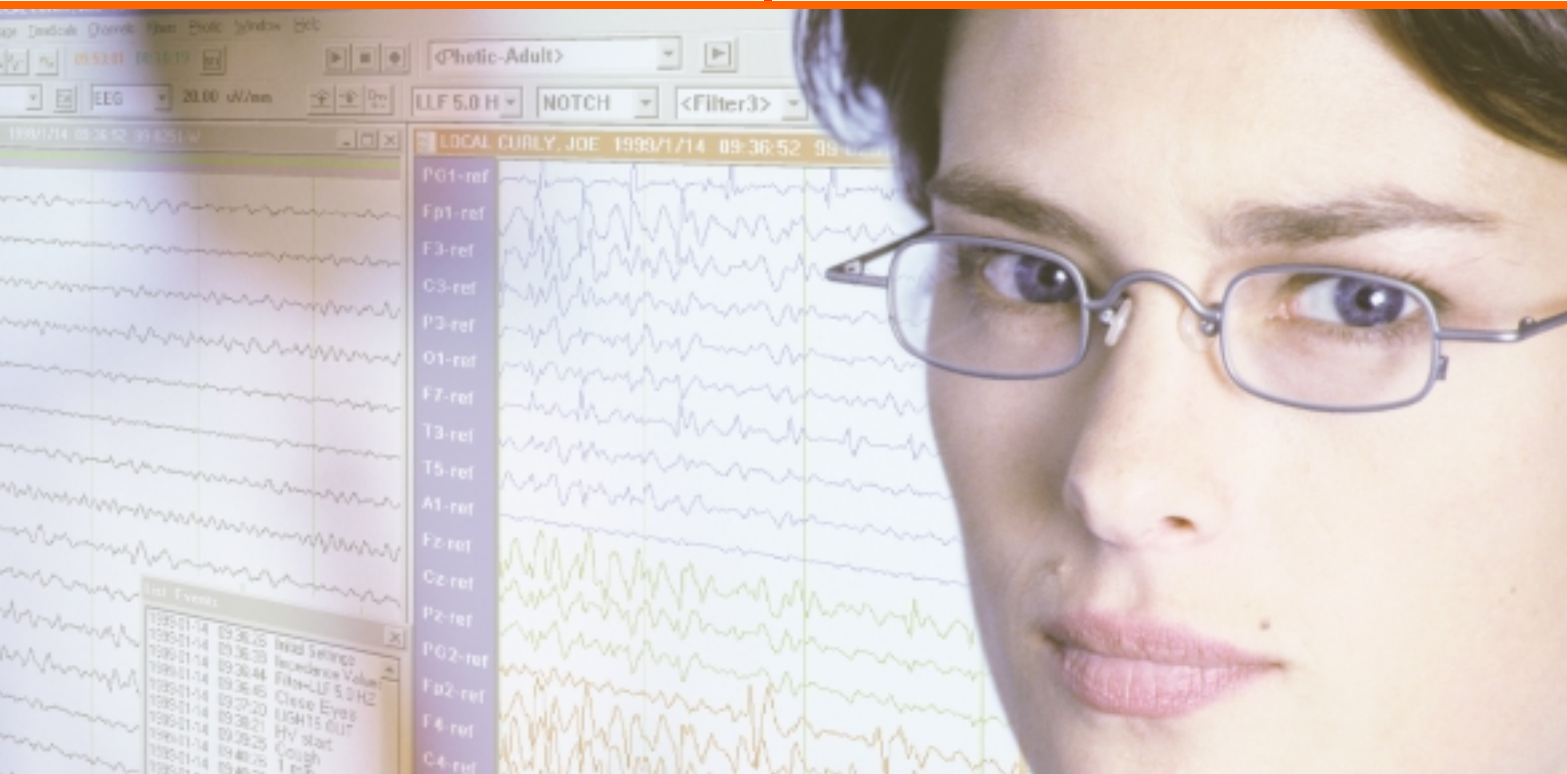
From EEG to LTM, analysis for R&D and polysomnography, from a single workstation to an ambulatory system to multi-site hospital networks, Stellate Harmonie offers a single, scalable platform dedicated to well-organized workflow and to facilitating the health care professional's task.

## **Digital technology speeds and facilitates traditional EEG**

- Look-back - allows qualified personnel to assess patients' condition while study is in process
- Review - edit previously marked events
- Annotate - enter pre-programmed and free-text notes in real-time or look-back panes
- Log events - simply point and click to jump from one event to another
- Photic protocols - automate sequences of photic stimulation
- Compare channels - see the difference...simply select and superimpose
- Compare synchronous views - view different montages or filters of the same EEG in split windows. Scroll synchronously with Pane-Sync to the view you require
- Measurements at your fingertips - cursor tools measure time, amplitudes and signal statistics
- Generate reports - export results quickly and easily to Microsoft Office templates for fast, accurate reporting and billing



## Leader in Spike and Seizure Detection



The development of  
algorithms is validated  
by independent studies

**Stellate's internationally recognized spike and seizure detectors save health care professionals' time and increase information available for interpretation.**

Stellate earned its reputation with the development of algorithms, validated by independent studies, which have become the gold standard for spike and seizure detection. Stellate's R&D effort is continually breaking new ground in epilepsy monitoring with effective, new approaches.

### **State-dependent spike detection**

This method utilizes the state of the EEG to fine-tune detection criteria. For example, it is more sensitive in slow-wave sleep than in active wakefulness. It makes an effort to separate vertex waves from real spikes only in the phasic stages of sleep. It reduces false detections triggered by eye blinks only when the patient is awake.

### **Newborn seizure detection**

Although seizures are common in newborns, they can be very difficult to identify by clinical observation. Stellate's newborn seizure detectors identify and mark a variety of patterns including repetitive spikes and rhythmic paroxysmal discharges at a wide range of frequencies. The effectiveness of the method has been validated in a large multicenter study.

### **Seizure onset**

When a seizure takes place, it is important for the observer to interact with the patient rapidly. For many patients, Stellate's unique seizure-onset detector is able to warn that a seizure has just started, thus allowing prompt observation. This detector is specially tuned to reduce the number of false alarms.

### **Fast and flexible review**

Instant access to every EEG and video event... Stellate Harmonie displays detections and patient-marked events in the event list and color-coded overview bar. Simply click to display spikes that occurred at a specific time or seizures coinciding with the event marker.

### **Powerful quantitative analysis for EEG**

- Compressed spectral arrays for up to 128 channels without interrupting real-time recording
- Spectra and band activity for up to eight user-defined bands
- Coherence and phase spectra to measure relationships between two channels over time
- Spectral activity map. Display up to eight topographical representations simultaneously
- Long-term trend displays of band activity, ten plots at a time

The LTM module enables Stellate Harmonie for spike and seizure detectors and advanced quantitative analysis of EEG.

### **At the forefront of innovation**

A research-based company, Stellate has assembled a multidisciplinary team of highly qualified scientists to keep its products at the forefront of innovation. It is actively involved in developing new methods of analysis, particularly in the fields of epilepsy and polysomnography (PSG).

### **A strong research presence**

Constant collaboration with visiting scientists has fostered a strong research presence that is demonstrated by the company's strict algorithm-validation procedures and publication record.

Our research efforts have resulted in the well-known spike and seizure detection methods used by many in the field and the recent introduction of a unique sleep staging program that incorporates user preferences to facilitate review.

Among its current projects, the R&D team is working towards the use of quantitative EEG in intensive care settings to detect onset of sustained EEG abnormalities and the use of source localization methods to reduce false spike detections.

The PSG module adds automatic analysis capabilities and report generation for the study of sleep disorders.

## Equipment platforms for every application

Individual labs to multi-site networks



Stellate takes a no-compromise approach to software development and hardware integration. Stellate Harmonie is available in PC workstation - stand-alone, mobile or networked - portable or ambulatory platforms.

The Stellate Harmonie workstation is a medical device designed to handle the processing and archiving demands of a neurodiagnostics lab. It utilizes an Intel-based platform designed specifically to handle intense processing loads and to deliver high quality video. Stellate Harmonie workstations are manufactured in conformity with ISO practices and use the highest quality components to assure robust and reliable integration.



## Networks

Stellate Harmonie software runs on Windows™ for stable and reliable hospital and remote networking. From a single lab to complex, multi-site networks for large institutions, Stellate engineers provide solutions tailored to each client's needs. Their know-how and experience assure trouble-free installation and operation.

## Portable

Stellate's portable platform is ideal for facilities that perform recordings on different wards, in satellite labs or in private residences. It is a unique portable recording system for monitoring, storing, transferring and analyzing up to 32 channels of neurophysiological bioparameters. It consists of a notebook computer and a light carrying case for the pre-amplifier, head boxes and other accessories. It can also be used with an attractive system cart for mobile monitoring.



## Ambulatory

Stellate Notta allows practitioners to increase recording capacity and offers patients a new level of mobility and comfort. Stellate Notta is a versatile, full-featured ambulatory recorder that is ergonomically shaped to fit on the waist and weighs just over one pound. It features a built-in pulse oximeter and records up to 32 channels. Fully integrated for use with Stellate Harmonie workstations, Stellate Notta enables patient-friendly ambulatory recording, anywhere.



## Synchronized Digital Video See what is happening...from anywhere



Reviewing...is as easy  
as moving the mouse

Stellate Harmonie's Digital Video module displays real-time waveforms and patient images on screen at the touch of a button. Reviewing waveforms and synchronous video is as easy as moving the mouse. And, you can monitor real-time data and video on hospital networks or by Internet from remote locations.

Zoom, MPEG quality, variable-speed replay and compression ratios facilitate use. Camera movement can be controlled from a remote location through a standard Internet connection.

Record continuously for up to 24 hours in one file or in event-triggered mode, storing only the audiovisual data associated with the detection of a seizure or a pushbutton. And Stellate Harmonie's flexible archiving makes it possible to save only the data you require, with or without video, reducing file size to save time and money.



### Reliable amplifiers with time-saving, software-controlled options

Stellate offers a variety of amplifiers that are flexible, functional and reliable.

Technologists appreciate the ease of software-controlled calibration, impedance and de-block functions. Amplifiers can be mounted on a stand or worn by the patient. Configurations allow from 16 to 128 channels. Amplifiers can be programmed with filters from 0.01 to 300 Hz.

Some models offer software control of stimulator input. This unique feature controls which intracerebral electrodes are connected to the stimulator. Functional stimulation studies are easier and faster to complete.

## Getting the best from your neuromonitoring system

### **The customer support relationship**

Stellate customer support is available 24/7. The company assigns a customer support representative to each customer to provide service that is personal and informed. The objective is to establish a direct relationship to assure that health care professionals learn to operate and adapt Stellate Harmonie to take full advantage of its potential. If a problem occurs, the technician can verify the system using Stellate Harmonie's remote diagnostics and, if necessary, call on the company's rapid response field assistance for on-site intervention. To avoid recurring problems, the technician regularly monitors the service record and brings any issues to the attention of Engineering and IT for solution. Stellate backs its products with comprehensive warranty coverage and extended service contracts.

### **Professional training**

Stellate Harmonie offers an extensive range of features and functionality. To assure effective operation, Stellate provides on-site professional training by registered EEG technologists who are also experienced in networking and audio-visual applications. For reference, clients can quickly access complete information from their system's manual and web-based courses.

### **Networking**

Take full advantage of Stellate's networking expertise. Stellate technicians and engineers have a solid base of experience from small, single-lab installations to complex multi-site networks for large institutions. They contact client health care technicians and Biomed staff for network details and cabling specifications. Final drawings are forwarded to the client who may select Stellate or another contractor to implement the installation. Stellate's participation in the process assures clear communications and quick execution.

### **Customizing your system**

Stellate Harmonie's open architecture enables custom on-line and off-line processing of recordings. Clients can use Stellate's Application Program Interface and then skilled C programmers or Stellate's software development teams to integrate their own proprietary functions into their systems.





## Your partner in diagnostics

Stellate is a leader in the field of clinical neurophysiology. The company develops and markets four main product groups: routine EEG, long-term monitoring, Sleep, and quantitative analysis.

Dr. Jean Gotman, a world-renowned neuroscientist at the Montreal Neurological Institute, founded Stellate in 1986 to commercialize the results of research conducted in computerized EEG analysis. Today, the company sells its products worldwide through its direct sales and marketing efforts and an international network of distributors.

Stellate supplies robust, easy-to-use, economic neuromonitoring systems. In addition to its standard systems, it designs custom solutions to clients' specifications. The company's spike and seizure detectors are recognized as the gold standard in the industry. Its new seizure onset detector is unique and Stellate leads the field in quantitative analysis. In Sleep, the company offers a full range of automatic analysis tools geared to the clinician, the technologist and the researcher.

Stellate is actively involved in research programs to develop new methods of analysis, particularly in the fields of epilepsy and polysomnography. Its R&D team works in direct collaboration with universities and hospitals on these programs as well as on the continuous improvement of existing methods.

Stellate focuses on customer service and on developing excellent relationships with its customers. Registered EEG and polysomnography technologists provide thorough on-site training and 24/7 telephone support assuring a reliable, innovative and ongoing partnership in diagnostics.





### **Mission statement**

Stellate is an organization dedicated to providing health care professionals with advanced digital neuro-diagnostic systems and new methods of analysis for EEG and the study of sleep disorders. Bringing together the knowledge and skills of health care professionals, scientists, software developers and engineers, Stellate offers its clients leading-edge products and ongoing support to advance the quality and delivery of patient care.

Your partner in diagnostics



376 Victoria Avenue  
Suite 200  
Montreal, Quebec  
Canada H3Z 1C3  
Tel.: 1-514-486-1306  
1-888-742-1306  
Fax: 1-514-486-0694  
Internet: [www.stellate.com](http://www.stellate.com)  
E-mail: [info@stellate.com](mailto:info@stellate.com)