

# Compumedics **vista**

A COMPUMEDICS CLIENT UPDATE  
ISSUE 2, 2007

## Accolades for Compumedics!

- Frost and Sullivan 2006 **Technology Leadership Award**
- Induction into the **Victorian Manufacturing Hall of Fame**



## Somerset Medical Center's **'Sleep for Life'** Opens Progressive New Sleep Facility

Somerset Medical Center's 'Sleep for Life' program has collaborated with Compumedics USA to create a new 20-bed sleep center in Hillsborough, New Jersey that is progressive in design and futuristic in concept. The center marries technology and human resources with maximum results for patients – enabling them to rest easy, knowing that their sleep disorder has received an accurate and comprehensive diagnosis. With Compumedics' diagnostics system as a key component, Sleep for Life is one of the nation's largest, most comprehensive and technologically advanced sleep centers.

"Compumedics is pleased to be the choice of Somerset Medical Center's Sleep for Life in its quest to be one of the nation's pre-eminent sleep centers," said David Burton, Compumedics CEO. "Our state-of-the-art system will enable Sleep for Life to meet the pressing need for accurate and timely diagnosis of sleep disorders."



## Sleep for Life

"What makes Compumedics the perfect choice for our new Sleep for Life Center is its combination of powerful hardware, precise and flexible sleep diagnostics software and ProFusion NeXus Laboratory Management Software," said David Flood, President, Sleep for Life. "We knew coming in that NeXus was one of the most advanced data and total lab management packages available, and we wanted the best for our patients. Compumedics was able to meet our rigorous requirements to help us fulfill our vision: to make Sleep for Life one of the latest, most technologically advanced sleep centers in the nation."

Continued on page 2

## INSIDE

- **PRODUCT NEWS - PROFUSION PSG 3 PRODUCT OVERVIEW** 3
- **CHOICE SLEEP PAPERS** 4
- **QUICK TIPS & SHORTCUTS - PROFUSION PSG 3** 4
- **COMPUMEDICS SOMTE AWARDED FROST & SULLIVAN 2006 TECHNOLOGY LEADERSHIP AWARD** 5
- **COMPUMEDICS & CHAIRMAN INDUCTION INTO THE VICTORIAN MANUFACTURING HALL OF FAME** 5
- **EVENTS DIARY** 6
- **CHINA ERP AND CURRY5 SCHOOL** 6
- **WASM - 2007** 6



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ProFusion  
nexus™

Continued from page 1

With the NeXus LMS package, Sleep for Life is able to integrate each patient's medical file into Somerset's existing medical information system infrastructure. Technicians at the center can readily check study status, automatically and securely archive data, gain remote access via the Web from virtually any location as well as send data to and obtain data from Somerset's Cerner information system, based at the medical center's main campus, five miles away.

Sleep for Life chose the Compumedics E-series system as its core lab equipment due in part to the system's state-of-the-art Sleep Lab diagnostics capabilities. The E-series is installed in hundreds of leading private sleep diagnostic facilities and prestigious institutions worldwide and offers powerful diagnostic testing and reporting capabilities. Featuring high channel counts for both physiologic and DC inputs, the E-series is flexible and equally suited for basic diagnostic studies as well as the most advanced research applications.

Somerset Medical Center is a nationally accredited, regional medical center providing comprehensive emergency, medical/surgical and rehabilitative services and a broad range of community programs to Central New Jersey residents. The medical center is a major clinical affiliate of the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School and a clinical research affiliate of The Cancer Institute of New Jersey.

Compumedics Limited, founded in 1987, is a global leader in the design and manufacture of diagnostic technologies for sleep disorders, neurophysiology and cardiology. Compumedics holds 80% share of the Australian sleep diagnostic market, and has a major and rapidly growing presence in the US, European and Asian marketplaces for its diagnostic monitoring devices.



The company has corporate headquarters in Melbourne, Australia and offices in the United States, Asia and Europe.

Compumedics businesses now include sleep-diagnostics (Sleep Division), Neuro-diagnostics (Neuroscan and Neuroscience Divisions), and non-invasive blood-flow diagnostics (DWL Division). All of these fields were pioneered or discovered in the 1980s, validated in the 1990s and are only now undergoing commercialization into the rapidly expanding \$1 billion plus global market. The company has increased its sales more than 4 fold from \$9 million (1999) to \$38 million (2006), reflecting its continued commitment to an effective sales and R&D organization.

Compumedics staff worked with Sleep for Life leadership to design a comprehensive and user-friendly installation that would enable Somerset's polysomnographers to quickly get up to speed and begin running sleep studies. The scope of the project encompassed all aspects of lab operation including sleep diagnostic equipment suitable for evaluation of all sleep disorders, comprehensive training programs for staff, and total implementation and integration of the project with Somerset's established Hospital Information Services – including a seamless interface with the medical center's existing six-bed in-hospital sleep center. Compumedics was able to create a customized series of services and solutions to meet these requirements and help Sleep for Life meet its goals of establishing a world-leading facility providing premiere patient care in an integrated, wholistic environment. Compumedics' longstanding investment in sleep research applications, such as the Sleep Heart Health Study with over 20,000 patients tested, added an attractive adjunct to the direction and emphasis that SMC is pursuing.

According to a recent Institute of Medicine report, as many as 70 million Americans may be affected by chronic sleep disorders. These conditions can decrease quality of life, lead to life-threatening illness, impact workplace productivity and threaten public safety. Up to 75 percent of people with certain serious sleep disorders go undiagnosed, and many are misdiagnosed. The goal of Sleep for Life is to use the latest technologies and the skills of leading sleep specialists to properly diagnose and treat all who suffer from sleep disorders and sleep deprivation. The center provides a caring, home-like environment with continuity, coordination and access to a range of specialists – all under one roof.

## Profusion PSG3 - Overview of New Features



Patient biocalibrations can be performed and saved before starting the study recording. New features include digital display of calibrated data in rawdata window, audible as well as visual alerts, paperless **Observation charts** and increased tending of data throughout the night.

**Page Back** is now incorporated into PSG Online 3, with the window able to be positioned anywhere you want using the **My Workspace™** features. **Full manual and automatic analysis\*** during recording is available, with the ability to manually edit the automatic analysis in Page Back.

**The Decision Assistant\*** can be called up at any time to give instantaneous statistics on parameters affecting the decision to start treatment in a Split night study.

### Profusion PSG 3

Multiple score data sets can be created. Each data set contains a hypnogram, and all marked event types (arousals, respiratory events, limb movements etc).

Scored data sets can be compared with the enhanced **Scoring Comparison** tool, which compares not only sleep staging, but also arousal, respiratory and limb movement statistics.

Scored data sets can also be exported/imported – useful for off-site scoring.

The layout of the **Profusion PSG 3** workspace can be customised, with up to 4 workspaces available per user.

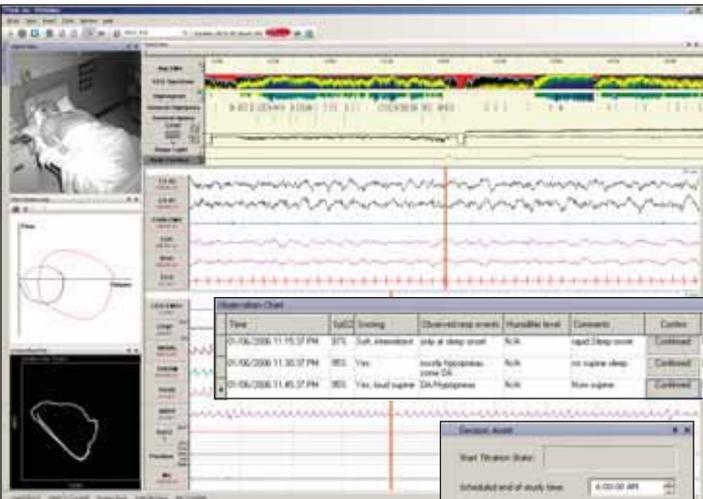
New features include instantaneous statistics (available on demand without having to generate a report), and **Flow-Volume** and **Konno Mead loops** for picking up more subtle respiratory features. PTT analysis and reporting has been added as has the ability to create derived EEG channels.

Reporting Enhancement tools include a **Report Wizard** to easily create or edit reports. The **Impressions Editor\*** allows text to be automatically added to reports based on the study statistics, and the **Recommendations Editor\*** allows physicians to easily enter treatment recommendations into reports.

### Study Manager

**Study Manager** (for non-neXus users only) now supports direct CD and DVD burning. External third party software is no longer required for archiving. Study lists load much faster than previously.

\*Available as an optional feature



### My Workspace™

The **Profusion PSG 3** software suite introduces the customisable **My Workspace™** feature. Build the layout of your Workspace the way you want, and save the layout for future use. Windows including **Digital Video**, Trace Properties and the new **Flow-Volume** and **Konno Mead loops** can be positioned anywhere – even on a second monitor.

Keyboard shortcuts can also be customised to suit your preferences.

Displayed trace layouts can be created and changed by dragging and dropping traces, and the **Auto Scale** feature can automatically set the optimal zoom for traces (available in **PSG Online 3** and **Profusion PSG 3**).

A workspace does not need to be configured in order to record or review a study.

### PSG Config

Recording configurations can now be setup without any PSG equipment attached to your network.

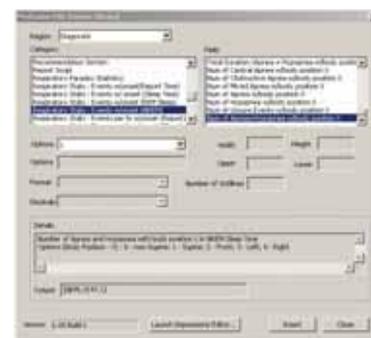
New features that are configured in **PSG Config** include **Online Analysis\*** during recording, a **Decision Assistant\*** to help in determining when to implement CPAP during split night studies, **Observation Charts** to automatically take a snapshot of required readings (manual entries can be made at any time), and multiple alerts on calibrated channels.

It is no longer necessary to assign a data type for every input.

The Summary window is now called the **Trend**.

### PSG Online 3

The layout of the recording workspace can be customised, with one workspace available per PSG device.



# CHOICE SLEEP PAPERS

- Hiscock H, Canterford L, Ukoumunne OC, Wake M.  
**Adverse associations of sleep problems in Australian preschoolers: national population study.**  
PEDIATRICS 2007;119(1):86-93
- Bandla H, Franco R, Statza T, Feroah T, Rice TB, Poindexter K, Simpson D  
**Integrated selective: An innovative teaching strategy for sleep medicine instruction for medical students.**  
SLEEP MEDICINE 2007;8:144-148
- Caples SM; Garcia-Touchard A; Somers VK.  
**Sleep-disordered breathing and cardiovascular risk.**  
SLEEP 2007;30(3):291-304
- Haines KL, Lana G, Nelson LG, Gonzalez R, Torrella T, Martin T, Kandil A, Dragotti R, Anderson WM, Gallagher SF, Murr MM.  
**Objective evidence that bariatric surgery improves obesity-related obstructive sleep apnea.**  
SURGERY 2007;141:354-8
- Lavie P, Herer P, Lavie L. Mortality risk factors in sleep apnoea: a matched case-control study. J. SLEEP RES. 2007;16:128-134  
McArdle N; Hillman D; Beilin L; Watts G.  
**Metabolic Risk Factors for Vascular Disease in Obstructive Sleep Apnea: A Matched Controlled Study.**  
AJRCCM; 2007;175(2): 190-195
- McNicholas WT, Bonsignore MR and the Management Committee of EU COST ACTION B26.  
**Sleep apnoea as an independent risk factor for cardiovascular disease: current evidence, basic mechanisms and research priorities.**  
EUR RESPIR J 2007;29:156-178
- Verhulst SL, Schrauwen N, Haentjens D, Van Gaal L, De Backer WA, K.N. Desager KN.  
**Reference Values for Sleep-Related Respiratory Variables in Asymptomatic European Children and Adolescents.**  
PEDIATRIC PULMONOLOGY 2007;42:159-167
- von Kanel R, Loredo JS, Ancoli-Israel S, Mills PJ, Natarajan L, Dimsdale JE.  
**Association Between Polysomnographic Measures of Disrupted Sleep and Prothrombotic Factors**  
CHEST 2007;131:733-739
- Kostikas K, Browne HAK, Ghiassi R, Adams L, Anita K. Simonds AK, Morrell MJ.  
**The determinants of therapeutic levels of continuous positive airway pressure in elderly sleep apnea patients.**  
RESPIRATORY MEDICINE 2006; 100: 1216-1225

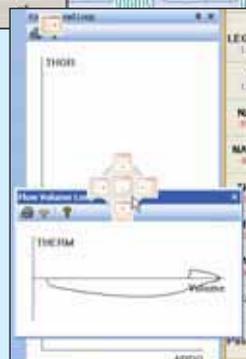
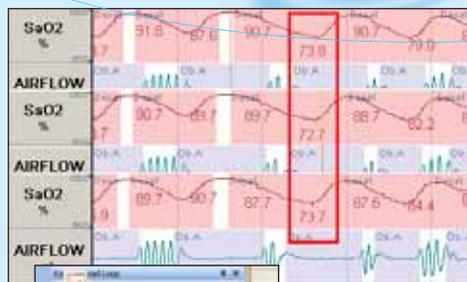
## QUICK Tips & Shortcuts for Profusion PSG 3 users

1. When click-dragging to mark an event that runs past the end of the current page, the trace display will scroll into the next page. As the trace display will no longer be aligned to the epoch markers, you can easily realign the page by simply pressing the Enter key.

2. Find desaturation nadirs without changing to the meter tool: Enable the numeric display on the SaO2 trace and use the left and right arrow keys to move the raw data one second at a time. The numeric display numbers stay in the same place on the screen and update to reflect the new data directly under them. A few keypresses makes for a quick nadir determination.

3. If you require many panels to be open when scoring but find that they tend to be too small, try tabbing the panels together. Click-drag the title bar of a panel to bring up the workspace interface. Drag the panel over another panel you want to tab with. The interface will show five central icons - choose the icon in the middle, and the two panels will now share the same space. Each panel can be selected with a tab at the bottom of that space.

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profusion PSG 3



# Compumedics awarded the 2006 Frost & Sullivan Technology Leadership Award

F R O S T & S U L L I V A N

Melbourne, Australia - March 19, 2007 – Leading Australian-based medical diagnostics company Compumedics Limited (ASX: CMP) was conferred the Frost & Sullivan 2006 Technology Leadership of the Year Award for the European sleep diagnostics and associated data-management systems market for tailoring a unique product line with its Holter style high-end sleep system, the "Somté".

The Frost & Sullivan Award for Technology Leadership is bestowed each year upon the company that has demonstrated excellence in technology leadership within their industry. The recipient company will have demonstrated technology leadership by excelling in all stages of the technology life cycle-incubation, adaptation, take-up and maturity-to ensure a continuous flow of improvements. By innovating leading-edge concepts, the company will have pioneered client applications.

Somté is a family of patient-monitoring devices that will help solve the dilemma of escalating healthcare costs around the globe that are associated with treatment of patients suffering from cardiovascular anomalies associated with sleep-disordered breathing.

Compumedics has a record of developing innovative product solutions. It was the first company to market sleep systems on the Microsoft Windows NT platform, enabling network capabilities. The Company developed the world's first wireless diagnostic system, the "Siesta", and is the leader in combining sleep and cardiac monitoring capabilities. The Company raised its investment in R&D from 18% of its total revenue to 21% in 2005. Compumedics has positioned itself to identify and deliver accessible medical technologies to the world.

"We are honored to be recognized by Frost and Sullivan for the technology leadership award," said David Burton, Executive Chairman of Compumedics Limited. "We will continue our focus on leading sleep-device technologies, particularly as this field continues to develop."



Since developing Asia/Pacific's first fully computerised sleep laboratory in 1987, Compumedics has established a market-leading position in Australia, Japan, China and has thriving operations in the USA, Asia/Pacific and European marketplaces.

This award follows similar achievements such as winning the NIH(USA) supply contract for the Sleep Heart Health Study (SHHS).

The Somté product family consists of an entry level device focused on respiratory variables, a more sophisticated device that supports respiratory variables and ECG or EEG that can also address the cardiac market, and a high-end device that provides a full sleep laboratory in the hand. All members of the family are fully self-contained with full waveform disclosure in the hand and utilise gold-standard sensors. They are supported by a full suite of software that provides for fully automatic analysis and sleep staging both online during data acquisition and offline during review. Advanced signal processing is available for cardiac arrhythmia detection and other sleep-related indicators such as pulse-transit-time and pulse-wave-amplitude. They are also supported with a full set of wireless acquisition services and fully synchronised video.

The Somté family is uniquely positioned to attract significant interest from sleep-disordered, sleep-cardiac-disordered and sleep-dental disordered practitioners alike.

- Extract from Australian Stock Exchange announcement

## Compumedics induction into the Victorian Manufacturing Hall of Fame



Mr. Warwick Freeman (Compumedics Chief Technology Officer) accepts the award on behalf of Compumedics.

Leading Australian-based medical diagnostics company Compumedics Limited (ASX: CMP) has been selected for induction into the Victorian Manufacturing Hall of Fame for its pursuit of excellence in manufacturing.

The Manufacturing Hall of Fame, established in 2000 by the Victorian Government, recognises, rewards and celebrates manufacturing companies that have won at least three manufacturing industry awards in the last five years, or have achieved recognition against significant competitive international standards for the last five years.

Compumedics commenced operations in 1987 and in 2002 expanded to a purpose-built manufacturing facility in Abbotsford, Melbourne. Compumedics today exports approximately 90% of its medical diagnostic products. Compumedics has sold over \$200 million of its products in markets around the globe.

At the official induction ceremony, Compumedics Executive Chairman, Mr. David Burton was also formally included in the Honour Roll, for the Victorian Manufacturing Hall of Fame in recognition of his personal on-going pursuit for excellence in manufacturing.



## About **Compumedics**

Compumedics Limited, founded in 1987, is a global leader in the design and manufacture of diagnostic technologies for sleep disorders, neurophysiology and cardiology.

In 1987 Compumedics established Asia Pacific's first fully computerised sleep laboratory. Compumedics holds 80% share of the Australian sleep-diagnostic market, and has a major and rapidly growing presence in the US, European and Asian marketplaces for its sleep, neurological, and Doppler blood-flow diagnostic monitoring devices.

**In 1995**, the company was selected to supply equipment to the US Sleep Heart Health Study, the world's largest sleep study of its kind, currently exceeding 12,000 studies with 20,000 patients scheduled by 2008. The company has corporate headquarters in Melbourne, Australia and offices in the United States, Asia and Europe.

**In 1998**, Compumedics was awarded the overall Australian Exporter of the Year.

**In 2000**, Compumedics was listed on the Australian Stock Exchange.

**In 2002**, Compumedics acquired US-based Neuroscan - the world's leading supplier of instruments for brain-research. In the US - the world's largest medical device market - Neuroscan hold around 90% of the market for brain-research products. This acquisition has enabled Compumedics to take advantage of the synergies between research and clinical-based Neuro Diagnostic technologies, re-affirming our commitment as a world-class developer of both sleep and neuro-diagnostic systems.

**In 2003**, Compumedics was awarded the Frost & Sullivan Award for Market Expansion Strategy.

**In 2004**, Compumedics acquired German-based DWL Elektronische GmbH, enabling Compumedics to expand its global operations into the neurovascular and cardio-vascular diagnostic fields.

**In 2006**, Compumedics was awarded the Frost and Sullivan Technology Leadership award for the innovative Somté recorder product.

**In 2007**, Compumedics and David Burton, Executive Chairman of Compumedics were inducted into the Victorian Manufacturing Hall of Fame for their pursuit of excellence in manufacturing.

Compumedics has grown to become a global medical diagnostic company with world leadership in three of the most exciting high-growth sectors and some 12,000 systems installed. Compumedics businesses now include their core and pioneering sleep-diagnostics (Sleep Division), Neuro-diagnostics (Neuroscan and Neuroscience Divisions), and non-invasive blood-flow diagnostics (DWL Division). All of these fields were pioneered or discovered in the 1980s, validated in the 1990s and are only now undergoing rapid commercialisation into the rapidly expanding \$1 billion plus global market.

The company has increased its sales more than 4 fold from \$9 million (1999) to \$38 million (2006), reflecting its continued commitment to an effective sales and R&D organisation.



*'Defining Life's Signals'*

## JUNE - 07

	DATE	AREA	PLACE	WEBSITE
Western Stroke Symposium	1 - 3 June	D	California, USA	www.iame.com/courses/wss0607
Associated Professional Sleep Societies	9 - 14 June	S	Minnesota, USA	www.apss.org
European Neurological Society	16 - 20 June	NS	Rhodes, Greece	www.ensinfo.com

## JULY - 07

	DATE	AREA	PLACE	WEBSITE
American Society of Electroneurodiagnostic Technologists	18 - 21 July	N	Orlando, USA	www.aset.org/
Human-computer Interaction Meeting	22 - 27 July	N	Beijing, China	www.hcii2007.org/home.html

## AUGUST - 07

	DATE	AREA	PLACE	WEBSITE
The Cardiac Society for Australia & NZ	9 - 12 Aug	S	Christchurch, NZ	www.csanz.edu.au/
British Ass of Cognitive N/science (BACN)	29 - 31 Aug	NS	Dundee, UK	www.bacn.co.uk/
Sleep & Breathing Meeting	31 Aug - 1 Sept	S	Palm Cove, QLD, Aus	www.worldsleep07.com/sleepandbreathing/

## China ERP and CURRY5 school

Approximately 100 participants from over 25 cities - and over 30 sleep labs - in China, Hong Kong, Taiwan and Korea, came together for a Neuroscan ERP & CURRY5 course in late March. The school was held in Beijing, China and was conducted in both English and Chinese by Dr. Michael Wagner from Compumedics and Professor Lun Zhou from Beijing Fistar. Deemed a successful event by all, this was the 4th of it's kind in China.



## WASM 2007

World Association of Sleep Medicine - Saw the launch of the revolutionary new Profusion PSG3 and Somté PSG for the Asian Market in Bangkok, Thailand.

Photo from left to right: Mr Andrew Tan, Mr Gerald Lim, Dr. Christian Guilleminault, Dr. Naiphinich Kotchabhakdi, Mr. Sombhum Kaewitayakarn and Mr. Thawechai Khemaluk from Jebesen & Jessen Technology (Thailand) Ltd. and Mr Ben So.



## THE COMPUMEDICS DIVISIONS *Defining Life's Signals*

Compumedics' operations consist of five divisions - each with its own product focus



Compumedics Sleep  
Clinical Diagnostic Systems  
for Sleep Disorders



Compumedics Neuroscan  
for Neurophysiology  
Clinical Diagnostic Systems



Compumedics Neuroscience  
World-leading Research  
EEG/ERP systems



Compumedics NeuroMedical Supplies  
Electrodes, sensors  
and supplies for Neurology



Compumedics DWL  
Ultrasound Doppler Systems

## CONTACT [www.compumedics.com](http://www.compumedics.com)

If you would like to receive the Compumedics Vista Update via Email, please send your details and email address to [Marketing@compumedics.com.au](mailto:Marketing@compumedics.com.au)

AC886 Issue 1

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