

Compumedics vista

A COMPUMEDICS CLIENT UPDATE
ISSUE 9, OCTOBER 2007



CELEBRATING
20 YEARS
of SLEEP
DIAGNOSTIC
EXCELLENCE
1987 - 2007

Compumedics Celebrates 20 Years of Sleep Diagnostics Excellence at World Sleep '07

The tropical surrounds of Cairns, Australia, hosted the 5th World Congress of the World Federation of Sleep Research & Sleep Medicine Societies (World Sleep 07) in early September.

The four day conference was in perfect time to celebrate Compumedics **20th Year in the Sleep Diagnostic industry.**

Founded in September 1987 by then electronic engineer, Mr. David Burton, Compumedics established Asia Pacific's first fully computerised sleep clinic at Melbourne's Epworth Hospital within it's first year. It has since become a world leader in the design and manufacture of diagnostic technologies for sleep disorders, neurophysiology and cardiology.

Following the success of the Epworth Sleep Clinic installation, in 1989 Compumedics focused on the development of products that sold into the growing Sleep Clinic market and the home monitoring market. This led to the release in 1991 of Compumedics' S-Series laboratory sleep system and later the P-Series portable systems.

Compumedics became best known on the world stage when, in 1995, NASA chose its P-Series portable sleep systems for two separate contracts.

The first involved Space Shuttle mission preparation and the second the international space station mission preparation. The P-Series was further endorsed when pitted against considerable international competition, Compumedics won the rights to supply diagnostic

equipment to the largest sleep study in the world - the USA-funded Sleep Heart Health Study (SHHS). Currently, the SHHS exceeds over 14000 studies with 20000 patients scheduled by 2008.

From thereon in, Compumedics sleep technologies fast became recognised as the best in the world.

Along with the recognition, came the accolades. In 1998 the company was awarded the overall Australian Exporter of the Year. And in 2000, Compumedics was listed on the Australian Stock Exchange.

The company has also been recognised with many other awards, including being named Small Business of the Year in 1999 at the Telstra and Australian Government's Small Business Awards and the AusIndustry Innovation Award. Compumedics also received the 2001 Australia Export Award for Small to Medium Manufacturers and the 2001 Governor of Victoria Export Award for Small to Medium Manufacturers as well as 2003 Frost and Sullivan Award for Market Expansion Strategy.

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COMPUMEDICS
'Defining Life's Signals'

The most recently received awards have been:

- 2006 Frost and Sullivan Award for European Sleep Diagnostics Technology Leadership of the Year award
- Induction into the Victorian Manufacturing Hall of Fame for its pursuit of excellence in manufacturing (2007)
- Mr. David Burton was also formally included in the Honour Roll, for the Victorian Manufacturing Hall of Fame in recognition of his personal ongoing pursuit for excellence on manufacturing (2007)

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 the commitment to being a world-class developer of both sleep and neuro-diagnostic systems.

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

Today, Compumedics now holds over 80% share of the Australian sleep-diagnostic market. It 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.

With a Corporate Headquarters in Melbourne, Australia, Compumedics now employs over 150 people world wide, with offices in Singen, Germany & North Carolina, USA .

**So here's to Compumedics -
20 years of Sleep Diagnostic Excellence.**

Compumedics wishes to thank you for your support and participation at **World Sleep '07.**



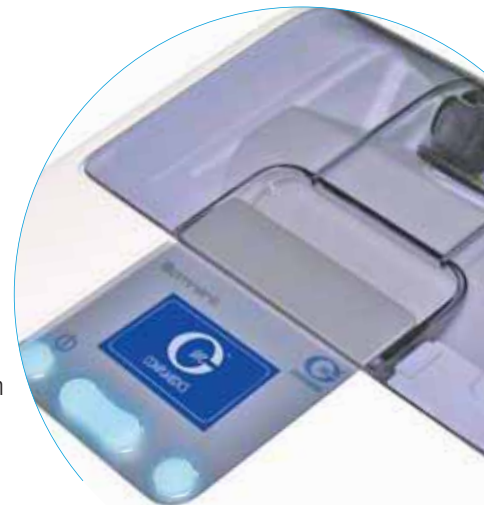
Affirmation of **Compumedics'** **Sleep-Treatment Strategy**

Compumedics' long-term strategy of complementing its' suite of products for sleep diagnostics with new and innovative sleep treatment products, reached a significant milestone in June 2007 with the completion of binding letter of intent with a major international partner in the medical devices market.

The relationship commenced with Medigas Italia, a member of the global Praxair, Inc. group of companies, to commercialise Compumedics' SomniLink® SPAP® system in Italy and eastern European countries. The sleep-treatment market is in the order of ten-fold greater in magnitude than the sleep-diagnostics market in which Compumedics' current suite of products competes.

Compumedics has commenced negotiations to exploit the greater global sleep-treatment market with several companies, collectively which represent \$10 billion in annual sales. Compumedics expects to be able to update the market on outcomes of these negotiations when they reach material outcomes.

(more information on our website:
www.compumedics.com)



Somnilink™

ProFusion PSG3 applies new AASM scoring rules

Compumedics' latest release of ProFusion PSG3 software supports the new scoring requirements recently introduced by the American Academy of Sleep Medicine.

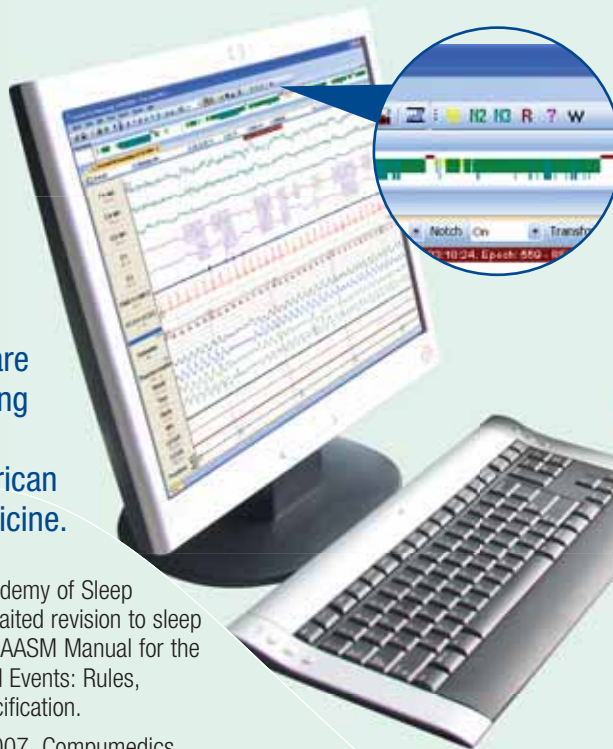
In May 2007, the American Academy of Sleep Medicine published the long-awaited revision to sleep staging and scoring rules - The AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specification.

At the APSS meeting in June 2007, Compumedics had another "world-first" event when they were the first manufacturer of sleep diagnostic equipment to be able to show all the new scoring rules in the software. This applied to both manual and automatic scoring.

Compumedics has since released software which is completely compliant with these new rules for both manual and automatic scoring. Users can select if studies should be recorded and scored in the conventional R&K mode, or the new AASM mode. Older "R&K" studies can also be converted automatically to the newer AASM style of scoring.

The AASM Mode applies to PSG Config, PSG Online 3 and ProFusion PSG 3. This allows users to:

- Score and report sleep studies with new AASM sleep stages – W, N1, N2, N3 and R for adults, W, N1, N2, N3, N and R for paediatrics, and I, Q, A for infants.
- Automatically convert R&K sleep staging to AASM sleep staging.
- Select dedicated EEG channels for discrete feature detection, e.g. Occipital for alpha detection, Central for sleep spindle detection and Frontal for K complex and slow wave detection.
- Apply new rules for sleep stage continuation or transition during automatic sleep stage scoring.
- Select dedicated respiratory channels for apnoea and hypopnoea detection on oronasal thermal sensor and pressure transducer respectively.



- Use default settings for automatic analysis parameters that match the AASM recommendations.
- Score and report recommended cardiac events.

Compumedics ProFusion software was also used in the first publication investigating the effect of the new scoring rules on the Apnoea-Hypopnoea Index.

1. Iber C, Ancoli-Israel S, Chesson A, and Quan SF for the American Academy of Sleep Medicine. The AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specifications, 1st ed.: Westchester, Illinois: American Academy of Sleep Medicine, 2007

2. Rechtschaffen A, Kales A, eds. A manual of standardized terminology, techniques and scoring system for sleep stages of human subjects. Los Angeles, CA: BI/BR, 1968.

3. Ruehland W, Rochford P, Singh P, Thornton A. The New AASM Rules for scoring hypopnoeas: Impact on the Apnoea-Hypopnoea Index. Sleep and Biological Rhythms August 2007 - Vol. 5 Suppl. 1. worldsleep07, 5th Congress of the World Federation of Sleep Research and Sleep Medicine Societies, 2-6 September 2007, Cairns, Australia.

Property	Value
Hypopnoea detection:	
Input	None
High Pass	0.05
Low Pass	15
Match	On
Apnoea detection:	
Input	Thermopile
High Pass	0.05
Low Pass	15
Match	On

Respiratory Inputs

Property	Value
EEG for Spindle detection:	
Input	C4
Reference	A1
High Pass	0.3
Low Pass	30
Match	On
EEG for Alpha detection:	
Input	O2
Reference	A1
High Pass	0.5
Low Pass	30
Match	On
EEG for Slow wave and K complex detection:	
Input	F4
Reference	A1
High Pass	0.3
Low Pass	30
Match	On

Sleep Inputs

CHOICE SLEEP PAPERS

- ACARTURK G, UNLU M, YUKSEL S, ALBAYRAK R, KOKEN T, PEKER Y.
Obstructive sleep apnoea, glucose tolerance and liver steatosis in obese women.
J Int Med Res 2007;35(4):458-66.
- BARANSKI JV, THOMPSON MM, LICHACZ FM, MCCANN C, GIL V, PASTO L, PIGEAU RA.
Effects of sleep loss on team decision making: motivational loss or motivational gain?
Hum Factors 2007;49(4):646-60.
- DAHLQVIST J, DAHLQVIST A, MARKLUND M, BERGGREN D, STENLUND H, FRANKLIN KA.
Physical findings in the upper airways related to obstructive sleep apnea in men and women.
Acta Otolaryngol 2007;127(6):623-30.
- BANERJEE D, YEE BJ, PIPER AJ, ZWILLICH CW, GRUNSTEIN RR.
Obesity hypoventilation syndrome: hypoxemia during continuous positive airway pressure.
Chest 2007;131(6):1678-84.
- WELLS RD, FREEDLAND KE, CARNEY RM, DUNTLEY SP, STEPANSKI EJ.
Adherence, reports of benefits, and depression among patients treated with continuous positive airway pressure.
Psychosom Med 2007;69(5):449-54.
- EINHORN D, STEWART DA, ERMAN MK, GORDON N, PHILIS-TSIMIKAS A, CASAL E.
Prevalence of sleep apnea in a population of adults with type 2 diabetes mellitus.
Endocr Pract 2007;13(4):355-62.
- SANTAOLALLA MONTOYA F, IRIONDO BEDIAUNETA JR, AGUIRRE LARRACOECHEA U, MARTINEZ IBARGUEN A, SANCHEZ DEL REY A, SANCHEZ FERNANDEZ JM.
The predictive value of clinical and epidemiological parameters in the identification of patients with obstructive sleep apnoea (OSA): a clinical prediction algorithm in the evaluation of OSA.
Eur Arch Otorhinolaryngol 2007;264(6):637-43.
- CHEDIAK A, ESPARIS B, ISAACSON R, DE LA CRUZ L, RAMIREZ J, RODRIGUEZ JF, ABREU A.
How many polysomnograms must sleep fellows score before becoming proficient at scoring sleep?
J Clin Sleep Med 2006;2(4):427-30.
- PIGEON WR, CRABTREE VM, SCHERER MR.
The future of behavioral sleep medicine.
J Clin Sleep Med 2007;3(1):73-9.
- GOESSLER UR, HEIN G, VERSE T, STUCK BA, HORMANN K, MAURER JT.
Soft palate implants as a minimally invasive treatment for mild to moderate obstructive sleep apnea.
Acta Otolaryngol 2007;127(5):527-31.
- PAGEL JF.
Obstructive sleep apnea (OSA) in primary care: evidence-based practice.
J Am Board Fam Med 2007;20(4):392-8.

QUICK Tips & Shortcuts for Profusion PSG 3 users

1. How do I enable the AASM mode?

In **PSG Config**, go to the Defaults tab of the Recording Configuration. Select the Scoring Mode option "AASM". Save the configuration to apply the AASM mode to all studies recorded using this configuration.

In **Profusion PSG 3**, open the Study Configurations window. Select the Scoring Mode option "AASM". Use this option to apply the AASM settings to studies recorded using older versions of Profusion.

2. Where do I configure the Input Assignments specific to the AASM mode (EEG inputs for spindle, alpha, slow wave and K-complex detection; Respiratory inputs for hypopnea and apnea detection)?

In **PSG Config**, go to the Analysis Settings tab of the Recording Configuration. Under Input Assignments, select either "Sleep" or "Respiratory".

In **Profusion PSG 3**, open the Options window. Under Input Assignments, select either "Sleep" or "Respiratory".

3. What settings do I use for the alternative hypopnea rule?

Under the Respiratory Parameters section of the Automatic Analysis settings, change the following parameters:

- Apnea/Hypopnea Detection Parameters...
 - Max Hypopnea relative duration: 50%
 - Min Hypopnea relative duration below threshold: 90%
- Desaturation Parameters...
 - Minimum desaturation - Hypopnea: 3%

Compumedics USA Headquarters has moved!

Compumedics USA is pleased to announce that we have completed the relocation of our USA Headquarters to Charlotte, NC!

This move lands Compumedics in a large metropolitan area with access to a major international airport hub and allows us to draw from a large highly skilled technical workforce. These changes will provide easier access to our customers and a readily available skilled workforce to continue to attract the very best talent available to support our customers.

In addition the new facility features a state-of-the-art training facility to host our future SCAN, ProFusion and DWL training courses.

Our toll-free contact lines will remain the same, though our direct lines have changed. We will continue to maintain an engineering and light manufacturing facility in El Paso for some time to come.

The new Business address is:

Compumedics USA, Compumedics Neuroscan and
Compumedics DWL
6605 West WT Harris Blvd
Suite F
Charlotte, NC 28269
Phone: 704-749-3200
Fax: 704-749-3299



The 21st Annual meeting of the Association of Professional Sleep Societies (APSS) - a smashing success for Compumedics!



The 21st Annual meeting of the Association of Professional Sleep Societies (APSS) was a smashing success with Compumedics introducing no fewer than 5 new products to the USA market. Show activities were preceded with several e-mail communications to customers letting them know what to expect when they stopped by the exhibit booth.

Our theme for this year's meeting was "Ask me about Innovationssssss from Compumedics". We had buttons and flyers with this theme imprinted and an attention getting flashing red light. The S's were representative of each of the new products that Compumedics was showcasing: Software - ProFusionPSG3, SomtePSG, Supplies- New catalog, Scoring Standards- new AASM Compliant scoring within ProFusionPSG3 and finally SOURCE5. In addition we had a few extra S's including special pricing on Siesta and our new Sleep cap! Each of these products was extremely well received and resulted in the most leads we have ever generated from a single show! Of course we had a lot of interaction with our current and prospective customers and were able to provide helpful tips and demonstrations to all!

OCTOBER - 07

	DATE	AREA	PLACE	WEBSITE
Annual Congress of the German Sleep Society (DGSM)	11 - 13 Oct	S	Dusseldorf, Germany	www.dgsm2007.de
Stroke Society of Australasia	17 - 19 Oct	D	Perth, Australia	www.strokesociety.com.au

NOVEMBER - 07

	DATE	AREA	PLACE	WEBSITE
NZSNT Conference	1 - 2 Nov	NS	Christchurch, New Zealand	
Society for Neuroscience	3 - 7 Nov	NS	California, USA	www.sfn.org/
Epilepsy Society of Australia	7 - 9 Nov	NS	Adelaide, Australia	www.sapmea.asn.au/conventions/esa2007/index.html
Medica	14 - 17 Nov	G	Dusseldorf, Germany	www.medica.de

DECEMBER - 07

	DATE	AREA	PLACE	WEBSITE
American Epilepsy Society	30 Nov - 4 Dec	NS	Pennsylvania, USA	www.aesnet.org/
Zdravookhraneniye	5 - 9 Dec	G	Russia	http://zdrav.mvdv.ru/exhibition/31/ex.htm

ERP Training Course - Shandong, China

The southwestern province of Jingnan, Shandong in China was the venue of the most recent ERP Training Course. Held as a joint venture between Compumedics and Fistar, the ERP Training Course is held twice a year with attendance climbing at each school.

The latest training was held in late August and approximately 65 members from over 25 cities in China and Taiwan were in attendance. Instructed by Professor ZhaoLung the school was deemed a great success by all attendees.



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
World-leading Research Neurophysiology Clinical Diagnostic Systems



Compumedics Neuroscan
World-leading Research EEG/ERP systems



Compumedics NeuroMedical Supplies
Electrodes, sensors and Sleep laboratories and supplies for Neurology



Compumedics DWL
Ultrasound Doppler Systems

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

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