

Compumedics vista

A COMPUMEDICS CLIENT UPDATE ISSUE 12, 2008



Compumedics joins Germany's high tech élite

With the award of membership to
the **Top 100** innovative companies.

From the town of Singen in Baden (south-west Germany) originate products that can save lives: The company Compumedics Germany GmbH develops highly sophisticated ultrasound Doppler systems which offer new ways to understand the human brain. Using the modern medical devices of the DWL brand diseases of the blood vessels can be diagnosed and treated reliably with precision and efficiency. More than 7000 devices have already been installed - in more than 120 countries, from Australia to Zimbabwe.

When adding the professional years of only the 5 members of the Research and Development department one gets the extraordinary sum of 63 years of experience. It is no wonder that Compumedics Germany is number one in the world for their line of business. "We work in a very small niche market", says General Manager Christoph Witte. "In the field of stroke diagnosis there are only a few leading authorities in the world. "The Compumedics staff from Germany certainly belongs to them. They are the only ones who have developed and patented a device for detecting solid and gaseous emboli - that is deposits in the blood - and classify them as either solid or gaseous. With this, strokes e.g. during heart surgery can be successfully avoided.

Such innovations are usually created by working closely together with professors of neurology. "I stay in close contact with numerous scientific opinion leaders all over the world", says Christoph Witte. "Thus we know at any time the wishes of our customers."



"Innovation means to us to react quickly and efficiently to the needs and wishes of the market."

Among the customers are for example, physicians in neurology, neuro-surgery, cardio- and vessel medicine. They use the devices for measuring the blood flow characteristics in the vessels or for the evaluation of hemodynamics.

Which new ideas that are realized is decided by the top management of Compumedics Germany. General Manager Christoph Witte and Technical Manager Jürgen Zolondz are always tightly involved in the innovation procedure. "In a company of our size is goes without saying that all departments including the management sit around the table and work together", says Witte. The result: excellent quality, innovative products and a good reputation in the medical technology branch. Their products are even used under water, in the Andes, in the Himalaya and in space. This way the devices are further developed in research projects throughout the world.

CELEBRATING

20 YEARS
of SLEEP
DIAGNOSTICS
EXCELLENCE
1987 - 2007

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COMPUMEDICS
"Defining Life's Signals"

APSS - A great success!

Compumedics was excited to be an important participant in another fantastic APSS annual event, the **SLEEP 2008 conference** in Baltimore, MD. USA in June. The Compumedics booth proudly proclaimed our 20 years of excellence in Sleep diagnostics featured all new artwork and while showcasing our full product line.

As we continue to spread the word about all the great Compumedics products and innovations, we playfully chose the theme of "the best kept secret in sleep" to make sure everyone could experience the depth and breadth of our product solutions. To encourage attendees to help us spread the word, we handed out great looking custom Compumedics t-shirts to all guests that shared their top three reasons to choose us for all their clinical sleep, and research needs.

The conference was an amazing success with over 400 people stopping by to tell us all the reasons they chose, or will choose, Compumedics for their needs. The booth was sectioned to highlight our areas of expertise in sleep including Research, Clinical, Ambulatory and Home Sleep testing. The buzz on the show floor definitely leaned towards Home Sleep testing and to compliance with the latest scoring recommendations - needless to say Compumedics was prepared with solutions for every sector, requirement and budget!

With practically our entire USA sales and management team on hand all customers and prospects were able to easily get their questions answered. And while these conferences involve a lot of hard work, it was evident that a lot of Compumedics pride was showing and that a good time was had by all!



EMEA Clinical Training Bootcamp

In April 2008 we welcomed over 40 of our Distributors from Europe, the Middle East and South America to a Clinical Training Bootcamp in Hamburg Germany.

The Compumedics Hamburg office, as well as the Baseler Hof Conference Centre, were the venues for this event.

Distributors were given comprehensive training in the Xegis EMG product range by Alfred Ortner with assistance from Michael Pack, as well as hands on training in Neuvo and Profusion EEG4 by Compumedics Chief Technical Officer Warwick Freeman. Our Sleep Specialist Dr. Ken Whitton also conducted hands on training using PSG3 and Grant Uthmeyer, Compumedics Software Engineer, presented an introductory session as well as extra in-depth sessions on Profusion Nexus.

Our EMEA Business Director Paul Spooner was on hand and had the task of making sure it all ran smoothly and handled all formalities.

This was a successful and beneficial five day event for all those who attended, with a delicious and enjoyable group dinner at the lakeside DOC restaurant on the Tuesday evening.

Our thanks to those who attended – we now look towards the EMEA Distributor Meeting in Italy in September!

PRODUCT NEWS



compumedics profusion EEG 4™

Unlimited Potential in Routine and LTM EEG

Unlimited Potential in **Routine and LTM EEG**

Compumedics ProFusion EEG4 is the true next generation clinical and LTM software package that offers unprecedented ease of use both in the EEG lab, and in post-recording analysis and review. Developed in close consultation with EEG clinicians and neurologists, it is designed for easy navigation and editing of up to 45 days of continuously recorded EEG. With high sample rates (bandwidth up to 10kHz) and high channel densities (up to 256 channels) and a full suite of editing operations such as marking, deleting and copying whilst recording is in progress, ProFusion EEG4 offers unlimited potential in any EEG laboratory.

A sample of the features

Enhanced User Interface

- Multiple views of the same study allow easy comparison of individual traces or entire montages
- "My Workspace™" - Save and load your favourite workspace (e.g. two videos, a trace view, and a summary view) to make EEG4 work your way
- Trace grouping and scrolling allows easy inspection of high channel density recordings
- Time synchronisation between any view provides easy comparison of different presentations of a single data page

Next Generation Montaging System

- Next generation montage editor allows easy manipulation of any aspect of a montage on the fly
- Complex montages with weighted averaging can be created
- Montage changes are applied in real time so that any change is immediately apparent in concurrently opened polygraphs
- Electrode mapping allows dynamic assignment of patient electrodes to amplifier channels

Easy Visual Impedance Testing

- Full screen impedance testing display for easy visualisation in a busy clinical environment
- Large electrode graphics for better visualisation
- Autoscaling of colour meter while impedance testing is in progress

Unprecedented Video Quality

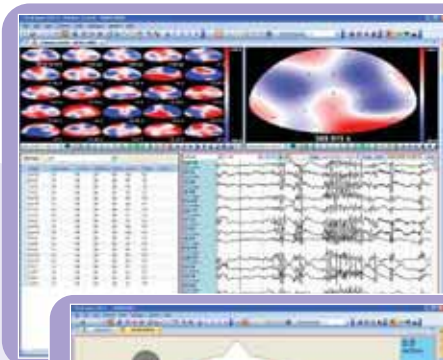
- Top end video resolution for unprecedented video clarity and superior digital zoom capabilities: full D1 resolution 720x576 at 30/25 frames per second
- Video is frame-locked to EEG data so waveforms and video are always precisely synchronised
- Open multiple video windows simultaneously with different zoom and pan in each window

Unlimited Potential for any EEG laboratory

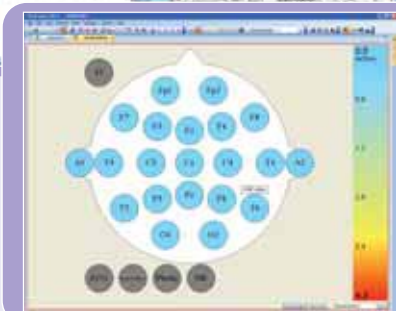
LTM Ready

- Perform editing for the day without interrupting recording
- Stop and resume recording as much as you like on any study
- Record for up to 45 days non-stop
- Auto-resume after power failure

Contact your Compumedics representative for more information



Multiple Views Of The Same Study



Impedance Testing



Dual Video Floating Window

CHOICE SLEEP PAPERS

- **Trazodone increases arousal threshold in obstructive sleep apnoea**

R. C. Heinzer, D. P. White, A. S. Jordan, Y. L. Lo, L. Dover, K. Stevenson, and A. Malhotra
Eur Respir J 2008;31 1308-1312

- **Sleep improves the variability of motor performance.**

HILL S, TONONI G, GHILARDI MF
Brain Res Bull 2008;76(6):605-11

- **Combined electrocardiogram and photoplethysmogram measurements as an indicator of objective sleepiness.**

CHUA CP, MCDARBY G, HENEGHAN C
Physiol Meas 2008;29(8):857-868

- **Pattern recognition of obstructive sleep apnoea and Cheyne-Stokes respiration**

WEINREICH G, ARMITSTEAD J, TESCHLER H
Physiol Meas 2008;29(8):869-878

- **Are OSAS patients impaired in their driving ability on a circuit with medium traffic density?**

TASSI P, GRENECHE J, PEBAYLE T, ESCHENLAUER A, HOEFT A, BONNEFOND A, ROHMER O, MUZET A
Accid Anal Prev 2008;40(4):1365-1370

- **Investigation of sequential properties of snoring episodes for obstructive sleep apnoea identification**

CAVUSOGLU M, CILOGLU T, SERINAGAOGLU Y, KAMASAK M, EROGUL O, AKCAM T
Physiol Meas 2008;29(8):879-898

- **Correlation between severity of obstructive sleep apnea and prevalence of silent cerebrovascular lesions**

NISHIBAYASHI M, MIYAMOTO M, MIYAMOTO T, SUZUKI K, HIRATA K
J Clin Sleep Med 2008;4(3):242-7

QUICK Tips & Shortcuts for Profusion EEG4 users

1.

To quickly adjust the sensitivity of a study's EEG traces, use the slider in the sensitivity toolbar. As the slider is moved, the traces are dynamically scaled to match, allowing the optimal size for reviewing to be easily selected.

2.

Individual traces can be selected or omitted from a montage to allow focusing on fewer displayed traces. Select the traces to be managed by left-clicking on the trace label and the trace will be highlighted. Multiple traces can be selected by holding down the Shift or Control keys while left clicking. Once the traces have been selected, you can choose to either hide or show just the selected traces by right-clicking on the trace label and selecting the 'Hide' or 'Show Only' options respectively. To return to the complete montage, right-click on the trace labels and select 'Show All'.

3.

Custom free text annotations can be added at any time while recording or reviewing by simply typing the annotation, no hotkey required. Whenever a letter key is pressed an annotation marker is created at the point of the cursor and the annotation box appears, allowing you to confirm your annotation before submitting it.

Latest Sleep Research using Compumedics E-Series Sleep System

A Case-Control Study of Obstructive Sleep Apnea-Hypopnea Syndrome in Obese and Nonobese Chinese Children*

Chest Journal - March, 2008 133(3) : 684-689

Zhifei Xu, MBBS; An Jiaqing, DN; Li Yuchuan, PhD; and Kunling Shen, PhD

Background: Obesity is a risk factor for obstructive sleep apnea-hypopnea syndrome (OSAHS) in adults. However, the prevalence of OSAHS in children is not clear, and the relationship between obesity and OSAHS remains controversial.

Methods: Obese children were recruited from the endocrinology, respiratory, and ear, nose, and throat clinics. Weight-matched, age-matched, and sex-matched children were recruited as control subjects. Standard questionnaires were administered, and a standardized physical examination was carried out. Lateral neck roentgenography, sleep polysomnography, full blood count, and arterial blood gas analysis were also performed. Children with body mass index z-scores of > 1.96 were considered to be obese. An adenoidal/nasopharyngeal ratio of > 0.67 was considered to constitute adenotonsillar hypertrophy (ATH). OSAHS was defined as an apnea-hypopnea index (AHI) score of > 5 or obstructive apnea index (OAI) score of > 1.

Results: Ninety-nine obese children and 99 control subjects were recruited into the study. Obese patients had significantly higher AHI and OAI scores, and lower sleep efficiency and minimum arterial oxygen saturation (MinSaO₂) than control subjects. The prevalence of OSAHS was significantly higher in obese children with or without the ATH groups than their nonobese counterparts (odds ratio, 1.9 vs 108, respectively; 95% confidence interval, 1.21 to 4.7 vs 6.2 to 191, respectively). Obesity, tonsillar hypertrophy, and adenoid hypertrophy were independent risk factors for OSAHS ($p < 0.001$, $p = 0.042$, and $p = 0.004$, respectively). There was a positive correlation between the degree of obesity and AHI ($r = 0.535$; $p < 0.001$), and an inverse correlation between obesity and MinSaO₂ ($r = -0.507$; $p < 0.001$). End-tidal CO₂, PaCO₂, and bicarbonate levels were within the normal range.

Conclusions: Obesity is a risk factor for OSAHS, and the degree of obesity is positively correlated with the severity of OSAHS. (CHEST 2008; 133:684-689)

Australia Human Brain Mapping SCAN & CURRY SCHOOL

Melbourne, Australia played host to a Scan & Curry school, immediately following the Human Brain Mapping conference in late June.

Running for 2 days, the Curry school was taught by Dr. Michael Wagner who was in Melbourne from Germany for the event. Dr. Wagner is one of Compumedics Neuroscan's top research scientists and is involved with the research, software development, training and helpdesk with the Curry software. Over a dozen students attended this Curry school and students were attracted from all over Australia, as well as China and Korea.

The Scan school ran for 3 days & was taught by Dr. Curtis Ponton who was visiting Australia for the first time, from our Compumedics USA office. Vice President and Chief Scientist for Compumedics Neuroscan, Dr. Ponton has managed the release of a number of software products including Scan, Source and Stim2. Within the last three years, Dr. Ponton has been involved in the development of the MagLink system, combining high-density EEG recordings with fMRI.

Full to capacity, this school also hosted students from around the world – Australia, Germany, Thailand China & Korea all included!

Both schools included hands on training and were held at a function facility in Southbank, Melbourne which is just minutes from Melbourne's Central Business District.



Compumedics joins Victorian trade mission to India

The Victoria Trade Mission for Healthcare was held on 20 -25 April 2008 and was a key opportunity for Compumedics to identify new business partners within the Indian region.

Jointly organized by the Australian Industry Group and Mr. Warwick Andree, Manager for Commercial Healthcare Exports, the mission was led by the Ex-High Commissioner and Special Trade Envoy to India, Mr. Darren Gribble. Compumedics was proud to be part of the delegation that that was invited to attend this event with Mr. Andrew Tan, Compumedics' South East Asia and India Business Manager representing the company.

Delegates were taken to Mumbai, Bangalore and Delhi in India, where we had the opportunity to visit local hospitals and understand their operation, requirements and needs. Delegates also had the opportunity to meet with the local healthcare industry groups like the Manipal, Fortis and Apollo.

During the stop-over at Delhi, along with Mr. Darren Gribble and Mr. Warwick Andree, we were given access

to visit a sleep lab in Indraprastha Apollo Hospital where Compumedics sleep systems are routinely used.

The mission delegates also had the opportunity to interact with Minister Theo Theophanous, Victoria's Trade Minister, who was the guest of honor during the mission's visit to the Manipal Hospital.

Individual meetings with local companies, who were keen to represent our products were arranged by the Australian Industry Group with help from Austrade, in India.

This was indeed an experience to be part of such a delegation, as the opportunities that were presented to individual delegates would be difficult to achieve without the help and support from organizations such as the Victoria State Government and the people who organized such events. Three potential business partners were identified during this trip. Compumedics looks forward to a successful future within the Indian region.



Above - From left to right:

Mr. Andrew Tan with the president of Mallya Hospital, Commodore Indru Wadhvani in Bangalore.

Mr. Andrew Tan at the Manipal's Wellness Center, with Chief Operating Officer, Somnath Das and some delegates.

Mr. Andrew Tan with the president (Medical Education) of Fortis Group - Dr Puri.

Mr. Andrew Tan with Mr. Darren Gribble at Indraprastha Apollo Hospital Sleep Lab in Delhi.

EVENTS UPDATE

S Sleep, N Neuroscan, D DWL, NS Neuroscience, G General

August - 08

	DATE	AREA	PLACE
6th Neuroscan China School	11-15 Aug	N	Kunming, China
Stroke Society of Australasia	13-15 Aug	D	Sydney, Australia
Profusion Proficiency Workshop	20-22 Aug	S	North Carolina, USA
Biomag 08	25-29 Aug	N	Sapporo, Japan
Intermediate Scan School	26-28 Aug	N	Washington, USA

September - 08

	DATE	AREA	PLACE
Australian ProFusion Proficiency School	4 - 5 Sep	S	Melbourne, Australia
World Congress of Psychophysiology (Olympics of the Brain)	8 - 13 Sep	N	St Petersburg, Russia
European Sleep Research Society (ESRS)	9 - 13 Sep	S	Glasgow, Scotland
DGN	10 - 13 Sep	NS	Berlin
Advanced Scan & Curry School with focus on fMRI	15 - 19 Sep	N	London, UK

October - 08

	DATE	AREA	PLACE
Australian Sleep Association	2 - 4 Oct	S	Adelaide, Australia
European Respiratory Society	4 - 8 Oct	S	Berlin, Germany
Australian ProFusion Proficiency School	6 - 7 Oct	S	Adelaide, Australia
Australian ProFusion Proficiency School	16 - 17 Oct	S	Sydney, Australia
ProFusion Proficiency Workshop	22 - 24 Oct	S	North Carolina, USA
Australian ProFusion Proficiency School	23 - 24 Oct	S	Brisbane, Australia

More information on these events is available at:

www.compumedics.com
Home > News > Upcoming Events

Please also check out our latest Compumedics Education Programme on the same page.

Compumedics at Human Brain Mapping Melbourne, Australia

At the Booth: (Left to right), Dr. Curtis Ponton, Mr Gerald Lim, Mr Simon Vogrin, Mr Cameron Charles and Dr. Michael Wagner.



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 EEG/ERP systems



Compumedics Neuroscience
for Neurophysiology Clinical Diagnostic Systems



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



Compumedics DWL
Ultrasound Doppler Systems



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