

# Newsletter

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## *Simplified Photographic Method to Determine Your Risk of Obstructive Sleep Apnea.*

### Background

Sleep disordered breathing occurs in about 20% of the adult population making it as widespread as diabetes or asthma. Obstructive Sleep Apnea occurs when the airway temporarily collapses during sleep, preventing or restricting breathing for up to ten seconds or more. Such events can occur several hundred times a night severely disrupting sleep.

Obstructive Sleep Apnea is linked to a range of serious chronic diseases such as stroke, heart failure, hypertension, diabetes, obesity and coronary heart disease. It is also implicated in increased traffic and workplace accidents.

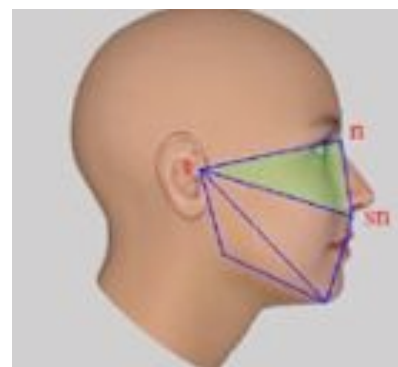
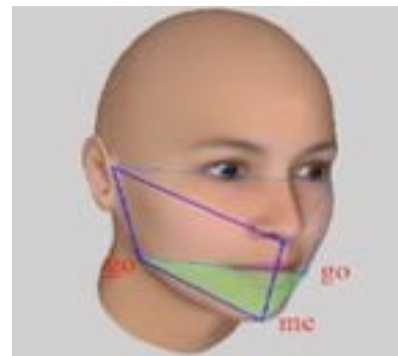
Despite the serious health consequences of untreated Obstructive Sleep Apnea, about 90% of people who have it remain undiagnosed and untreated. One of the main reasons for this is because diagnosis is costly and time consuming. Resources, such as Sleep Centres in hospitals where patients sleep overnight, cannot meet the demand so many patients go undetected and untreated.

### The Technology

The professor of respiratory medicine, Professor Peter

Cistulli, and Dr Richard Lee from Royal North Shore Hospital and the University of Sydney have found that by objectively quantifying a person's craniofacial anatomy through taking two digital photographs, they can predict the presence and severity of Obstructive Sleep Apnea using mathematical and statistical analyses.

For example, a physician may simply take both frontal and profile photographic images of the patient's head and neck from which a variety of craniofacial landmarks may be identified. The photographs are either taken directly in a digital format using a digital camera,



or if a digital camera is not available, the photographs would be converted into a digital format (i.e. scanned) such that the landmarks may be identified with reference to a pixel location on the image. The selected measurements are then subsequently computed with respect to those landmarks. In essence, the measurements represent various dimensions of the craniofacial

soft tissues compartments, bony compartments and a combination of both. The interaction between the

DO YOU THINK YOU HAVE AN INVENTION? OR DO YOU HAVE ANY QUESTIONS ABOUT RESEARCH COMMERCIALISATION - CONTACT THE OFFICE OF COMMERCIALISATION

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[www.officeofcommercialisation.com](http://www.officeofcommercialisation.com).

relative sizes of these compartments is important in the pathogenesis of Obstructive Sleep Apnea.

### Reliability

There are a number of methods that have been previously used for the prediction of Obstructive Sleep Apnea. These methods, however, provide inadequate accuracy in the prediction of the condition, or are impractical in a primary clinical care environment where the method and or tools required for implementation of the method must be easy to use with adequate reliability.

The method devised by our researchers will be simple, robust and reliable and is likely to radically change the number of people able to find out their risk of having Obstructive Sleep Apnea and to get treatment before suffering the numerous health problems related to the condition.

### Automating the technology

Taking the selected measurements from the pixel locations on the digital photographs and computing them in accordance with the model, requires automation. We are looking for a collaborator to help us develop an automated prototype. The reliability of an automated system will be readily evaluated clinically in the Sleep Centre at Royal North Shore Hospital in Sydney.

Further information is available from:

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## 2008 IP CONFERENCE - 11th SEPT 2008



The 2nd Annual IP Management and Commercialisation for Hospitals Conference, will be held in the Loewenthal Auditorium at Westmead Hospital, Darcy Road, Westmead, Sydney, NSW on Thursday 11th September 2008.

Following the

success of the Inaugural IP Management and Commercialisation for Hospitals Conference in May 2007, the 2008 IP Conference will include presentations on the importance of Intellectual Property, insights into the process of establishing an Office of Commercialisation and other vital elements

of commercialisation. The Conference is the collaboration of three peak groups - BioMed North Limited, the Sydney West Area Health Service Office of Commercialisation and the Northern Sydney Central Coast Health Office of Commercialisation.

Those who should attend include hospital-based executives, medical researchers from both health and university sectors, clinicians, support staff and policy makers. And from Industry: IP investors and advisers, lawyers, patent attorneys, and health commercialisation professionals.

Major sponsors include Spruson&Ferguson, The Australian Institute For Commercialisation, the Medical Industry Association of Australia and the National Health Sciences Centre.

Further details will be available shortly.

### *Patents, What They Mean and How to Manage Them*

Obtaining a patent is typically of high importance to innovators. Most countries in the world grant patents but applications need to be lodged in each country where patent protection is sought as there is no 'world' patent. A national patent gives its owner the monopoly right to exclude others from commercialising the invention covered by a patent in that country without the owner's permission. This situation persists during the lifetime of the patent, which is normally 20 years.

By way of quid pro quo the owner must agree to the invention being published 18 months after the date on which the patent application was first made, thus placing it in the public domain. For an invention to be patentable it must involve an inventive step which is not obvious to someone skilled in the art, and must also be capable of being made or used by industry. Generally an invention will be deemed not to be new, and therefore unpatentable, if details of it have already been published.

The NSCCH Office of Commercialisation has put together some general guidelines about patents which can be downloaded from [http://www.officeofcommercialisation.com/dnl/NSCCH\\_PATENTS,\\_what\\_they\\_mean.pdf](http://www.officeofcommercialisation.com/dnl/NSCCH_PATENTS,_what_they_mean.pdf).

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