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## SINGAPORE POLYTECHNIC OPTOMETRY CENTRE CHOOSES ZEISS CIRRUS-HD OCT

Singapore Polytechnic Optometry Centre (SPOC), a clinical teaching centre for final year Diploma in Optometry students, has recently acquired a state-of-the-art retinal imaging instrument, the Cirrus High Definition (HD) Optical Coherence Tomography (Cirrus HD-OCT, Version 3), with the aim of enhancing the quality of optometry related teaching and the delivery of high standard optometric services to patients. It is the first in Southeast Asia to deploy the Cirrus HD-OCT Version 3 instrument.



Clinical learning session on Cirrus HD-OCT for SP students

Dr Wilfred Tang, Head of SPOC said, "SPOC is proud to be one of the first to acquire this (Cirrus HD-OCT) cutting edge technological know-how. With this latest acquisition, SPOC will further enhance the delivery of high-quality primary eye care services to the public."

## STRATUS OCT IS OBSOLETE?!

Dr Adrian H.C. Koh, Founding Partner and Senior Consultant at the Eye & Retina Surgeons, Camden Medical Centre in Singapore has been dedicated to the advancement of new technology over the years. In the following interview, Dr Koh comments on the role of the Stratus OCT in his retinal practice, as well as the current role of 3D imaging in treatment and management of retinal and glaucoma related diseases.



Dr Adrian Koh

**Zeiss Connect: Dr Koh, how long have you been using the Stratus OCT in your retinal practice?**

Dr Koh: I have had the Stratus OCT for about 6 years now.

**Zeiss Connect: With the recent introduction of Spectral (Fourier) Domain OCT, do you think that the Stratus OCT (Time Domain) will become obsolete?**

Dr Koh: No.

**Zeiss Connect: Why not? Please elaborate.**

(continue on page 7)

**“The Stratus OCT remains easy to use, intuitive to interpret, and boasts a reliable normative database.”**



# IMPERIAL CITY EYE MEETING II IN HUE - PARTNERING WITH A MULTINATIONAL EFFORT IN VIETNAM

By Stephen De Souza, Division Manager, Medical Business Group, Carl Zeiss S.E.Asia

**O**n Monday, June 2, 2008, Dr Uday Devgan, MD of UCLA and Dr John Corboy, President of the Hawaiian Eye Foundation opened the second biennial Imperial City Eye Meeting (ICEM) in Hue, Vietnam.

The team; all volunteers, comprising 25 ophthalmologists from the U.S, Canada, UK, India, together with their Vietnamese host from Hue Central Hospital ran one of the most successful teaching courses in Vietnam .

The meeting originally intended for 250 ophthalmologists was over-subscribed to 300. What made this meeting achieved its goals was the outstanding contingent, professional translation similar to a UN meeting, simplicity and delivery of talks, a step by step approach of each procedure and the hands on workshops that was fully supported by Carl Zeiss.

The ICEM gave Carl Zeiss an opportunity to provide not only our diagnostics, visualization equipment and IOLs but also provide our expertise and participation with the training faculty.



*Dr Uday Devgan and Zeiss - fostering a trusted partnership*

60 participants got hands-on training on small incision and phaco-emulsification on 10 Zeiss OPMI Picos and an introduction to our easy to use XL Stabi ZO lens on the pig eyes. In the Dry lab, another 70 participants received practical training on the YAG laser, Biometry with the IOL Master, slit lamp

examinations on patients, a hands on session on the Stratus OCT and Matrix .

The success of the 2<sup>nd</sup> ICEM does not end here but will be expanded to provide fellowship training together with Hue Central Hospital giving Carl Zeiss another opportunity to provide our complete and broad range of products and expertise, towards education and becoming a trusted partner. *zc*

**|| The success of the 2nd ICEM does not end here but will be expanded to provide fellowship training together with Hue Central Hospital...."**



*Doctors giving tips and tricks on handling Zeiss microscopes*



*Participants examining patients using Zeiss SL-130 slit lamp*



*Hands on session on Zeiss IOL Master*



*Participants implanting Zeiss XL Stabi IOL*



## BEYOND THE ORDINARY

"Dear Partners,

In the new knowledge economy, the principles of business strategies are being transformed. Instead of focusing on physical assets and economies of scale, the drivers of success reside in connectivity and intangibles. Business today increasingly need to develop and manage complex ecologies around themselves so as to succeed.



Ven Raman, MD, Carl Zeiss S.E.Asia

In this context, we felt the need to introduce Zeiss Connect, a newsletter that we hope to keep us connected providing you with the latest updates on our products, services, clinical applications and other relevant information that we hope to be of value to you. It is also our hope to use this newsletter as a bridge in creating more meaningful partnerships with our customers. We welcome your feedback and contributions towards this newsletter to better serve our community. "

Ven Raman  
Managing Director  
Carl Zeiss Group  
India & S.E.Asia

## experiencing a CARL ZEISS people

**M**ore connection. That's what ZEISS CONNECT is all about. Besides featuring the latest relevant product and clinical updates, ZEISS CONNECT is another essential information channel for you to get connected with the staff in Carl Zeiss S.E.Asia so that you can attach a face with each of the individuals you partner with. In this issue, the editorial team introduces the Chief Officer in Carl Zeiss S.E.Asia & India to share her thoughts on this platform of communication going forward.



Heather Lim

"Congratulations to our Medical Business Group in Carl Zeiss S.E.Asia on the launch of their first newsletter, ZEISS CONNECT! The editorial team's priority of informing the latest and greatest is a fine step to make what we do visible at Carl Zeiss.

People, Carl Zeiss greatest assets and the Carl Zeiss organizations at every stage of organizational sophistication face the same question - "How should they change to succeed in the world today?"

We may not have the perfect answers at our fingertips, but already the willingness to connect, receive feedback and be part of a dedicated customer service oriented organization will certainly help us with the answer. For certain, the more credible answers can only come from the ground, where we all connect, collaborate and forge a bonded community.

In the spirit of community and to serve you better, this quarterly newsletter will also ensure that we drive our customer service excellence to the edge. Going forward, we will also be introducing our team members in Carl Zeiss in this segment.

Once again, congratulations on the inauguration of ZEISS CONNECT!"

Heather Lim  
Chief Officer  
Carl Zeiss S.E.Asia & India



It is also our hope to use this newsletter as a bridge in creating more meaningful partnerships with our customers."

- Ven Raman, MD

### acknowledgements

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### editorial

#### Publisher

Carl Zeiss Pte Ltd  
www.zeiss.com.sg

#### Editorial Team

Stephen De Souza  
Daniel Yeo Seng Poh  
Yuen Wai Leng  
Ng Pei Ling

#### Design

Ng Pei Ling

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## SAFE & EASY WAY OF DELIVERING LASER FOR RETINA WITH VISULAS 532s

**Zeiss Connect met with Dr Adzura Salam, MBBS (Manipal), MS (Ophthal) UKM Head, Department of Ophthalmology of the International Islamic University Malaysia.**

**Zeiss Connect: What retinal diseases do you use the Zeiss VISULAS 532s photocoagulation laser to treat?**

Dr Adzura: The common cases treated with VISULAS 532s photocoagulation laser in my centers are vascular occlusive diseases such as proliferative diabetic retinopathy (PDR) and central retinal vein occlusion (CRVO) with neovascularization. Other indication includes clinically significant macula oedema (CSMO), rubeosis iridis with neovascular glaucoma and barrier laser in retina break.

**Zeiss Connect: What are some of the most important and unique attributes of this laser?**

Dr Adzura: It has the thermoelectric cooling with enhanced stability management guarantees perfect homogeneous and reproducible treatment results, even during my busy 'laser day', It also has a high end laser slit lamp with coaxial laser coupling.

It has an intuitive, language-independent user guidance to facilitate the physician's work. The white on blue display is easily legible in a darkened room, allowing users with prescriptions of +/- 2.25D to work without their glasses.

**Yes, the LASER POWER IS VERY STABLE. My usual PRP setting for a patient with clear media is between 150-180mW power..."**

The electronic micromanipulator on the joy stick allows the best view and most precise laser application. It ensures the ultimate in controlled safety. The precise guidance of the aiming and therapy beams guarantees optimum illumination of the site of therapy at all times, regardless of the periphery or the vicinity of the macula.

**Zeiss Connect: How would you sum up your experience with the VISULAS 532s?**

Dr Adzura: From my experience, VISULAS 532s photocoagulation laser is safe, efficient and easy to use in treatment of indicated retina diseases. Till date, I have never encountered any side effects when the laser is used following a standard procedure guideline.



Dr Adzura Salam

**Zeiss Connect: Dr Adzura, could you please share with our readers a clinical case?**

Dr Adzura: Sure. The first case is a 36 year-old male with known history of IDDM developed focal oedema in the right eye. Focal laser was administered. The fundus photo showed resolved focal oedema after 3 months.

The second case is a 65 year-old male with resolving of neovascularization of the disc and elsewhere, evidenced by fibrosis, 6 month after PRP.

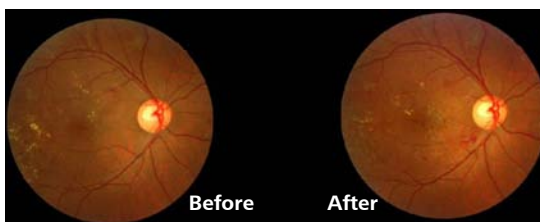


Figure 1: Resolved Focal Oedema after 3 Months



Figure 2: 6 month after PRP

**Zeiss Connect: Thank you Dr Adzura for sharing with Zeiss Connect your extensive clinical and hands on experience with the Zeiss VISULAS 532s.**

Dr Adzura: It is my pleasure. zc

(Dr Adzura can be contacted at: [adzura@iiu.edu.my](mailto:adzura@iiu.edu.my))

## UPCOMING EVENT BY CARL ZEISS

### IOL MASTER TALK

Topic: Achieving Better Surgical Outcome With The New IOL Master V5.0  
Date: 1 August 2008  
Time: 6.30pm - 9.00pm  
Venue: Camden Medical Centre, Singapore  
Speakers: Dr Fam Han Bor, M.D.  
Dr Chua Wei Han, M.D.  
Enquiries: Ms Ng Pei Ling @ (65) 6845 0381, [p.ng@zeiss.com.sg](mailto:p.ng@zeiss.com.sg)

The calendar listing above may subject to change.  
To view updates online, please go to [www.zeiss.com.sg](http://www.zeiss.com.sg) and click on Event Calendar

# SINGAPORE POLYTECHNIC OPTOMETRY CENTRE - PIONEERING OPTOMETRIC EDUCATION & SERVICES



Students from SP Optometry Centre (SPOC) using the Cirrus HD-OCT

(continue from page 1)

By Tham Yih Chung, Singapore Polytechnic Optometry Centre Lecturer

Singapore Polytechnic Optometry Centre (SPOC) was established in 1990 as a clinical teaching centre for final year Diploma in Optometry students. At this centre, students learn to detect, diagnose and manage patients with abnormal eye conditions. SPOC also serves to provide comprehensive and affordable eye care services to the public. It is the only centre of its kind in Singapore that provides both optometric education and primary eye care services.

**Combining the latest 3D rendering function, the Cirrus HD-OCT will serve as an innovative tool for SPOC in the early detection of retinal diseases, particularly age-related**

## Cirrus HD-OCT - An Advanced Teaching Tool in SPOC

The acquisition of Cirrus HD-OCT is indeed a significant milestone in the area of optometry education and clinical diagnosis for Singapore Polytechnic Optometry Centre (SPOC). This emerging technology will be employed as an advanced teaching tool for demonstration of discrete details of the retinal anatomy structure. The high resolution images captured by Cirrus HD-OCT have demonstrated high correlations to histological section images.

### Cutting-Edge Technology

Combining the latest 3D rendering function, the Cirrus HD-OCT will serve as an innovative tool for SPOC in the early detection of retinal diseases, particularly age-related macular degeneration and diabetic macular oedema conditions which have shown an increase in prevalence among elderly population. This cutting-edge function will also allow SP students to better appreciate the pathogenesis of retinal diseases.

### Minimise the Loss of Vision

The latest Cirrus HD-OCT refines the technique of measuring peripapillary retinal nerve fibre layer (RNFL) thickness. The inclusion of a multi-ethnicity and age matched RNFL normative database will greatly help in the discrimination between normal and glaucomatous eyes. Recognising that glaucoma is one of the leading causes of blindness, SPOC aims to effectively utilize Cirrus HD-OCT to aid in the early diagnosis of glaucoma to minimize the avoidable loss of vision among elderly population. *zc*

## >> CARL ZEISS SOUTH EAST ASIA SALES CONTACTS

**Singapore Office**  
Ms Julie Kim  
Product Manager  
T: (65)-9832-8396  
E: j.kim@zeiss.com.sg

**Malaysia Office**  
Mr Yap Chun Chong  
Sales Manager  
T: (603)-7877-5058  
E: c.yap@zeiss.com.sg

**Vietnam Rep. Office**  
Mr Lam Nguyen Hoai  
Chief Representative  
T: (84)-913-222-767  
E: l.nguyen@zeiss.com.sg

**Thailand Office**  
Ms Naruemon E. Swann  
General Manager  
T: (66)-2274-0643  
E: naruemon.e@zeiss.com.sg

# LATEST: STRATUS OCT SOFTWARE V5.0

By Stephen De Souza, Division Manager  
Medical Business Group, Carl Zeiss S.E.Asia

Carl Zeiss, has 4 offerings in our OCT family of products, the IOL Master which uses OCT technology to measure the axial length, the Visante OCT for anterior segment imaging and for the posterior segment; we have the Stratus OCT (time Domain) and Cirrus OCT (Spectral Domain).

## 7 Thousand Units Sold

The Stratus OCT is one of our most successful products having sold over 7 thousand units since its launch in 2003. In line with our continuous commitment to clinical research and product development, Carl Zeiss has expanded the functionality of the Stratus platform with software version 5.0 while addressing enhancements requested by our customers that has a Glaucoma progression software. Please refer to Figure 1 for one of the new features - GPA Advanced Serial Analysis.

**"Carl Zeiss has expanded the functionality of the Stratus platform with software version 5.0 while addressing enhancements requested by our customers"**  
- Stephen De Souza

## Familiar Look for Stratus OCT Review Software

With software version 5.0, the user interface, screen displays and printouts are now identical to the Stratus OCT Instrument Software. You can operate the full analysis capabilities of the Stratus OCT instrument from the lane, your office, or a remote location.



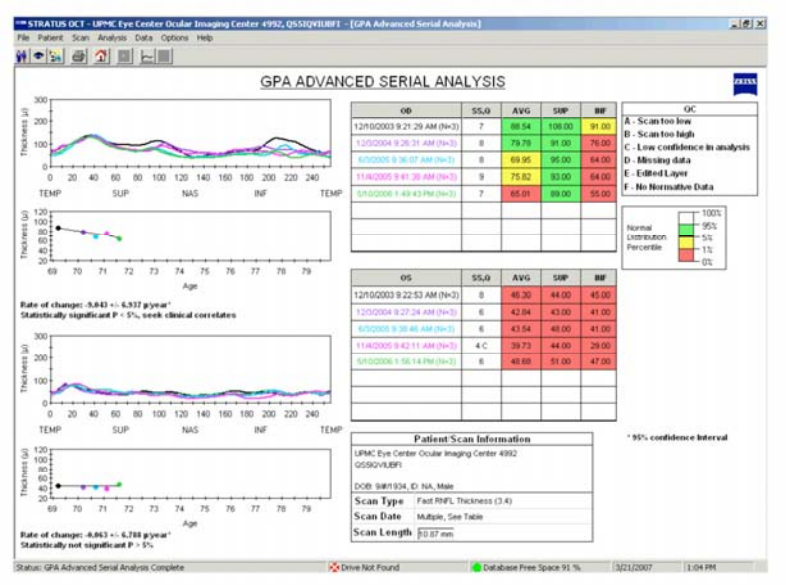
Stephen De Souza

## Outlook

Carl Zeiss will continue to expand our product line and market position to address our customers from clinical applications, configurations and price points.

Our intent is not only to provide the most advanced technologies, but also to offer innovative systems that best meet the needs and expectations of our customers. Keep a lookout for more updates on new application software for Stratus and Cirrus HD-OCT! **zc**

## New Tool to Evaluate Progression - GPA Advanced Serial Analysis



**"OCT GPA progression analysis provides a new tool for quantitative structural change that may directly affect clinical decision making."**  
- Joel S. Schuman, MD, FACS

GPA Advanced Serial Analysis will help identify change in RNFL peripapillary measurements. This new RNFL analysis plots your patient's RNFL thickness over time and reports statistically significant change and rate of change. Tabular data with detailed information is presented in a convenient layout. The entire analysis is provided in one simple, comprehensive report for efficient, effective review.

Figure 1: New Tool to Evaluate Progression - GPA Advanced Serial Analysis



Stratus OCT™

## “WHAT LIES BENEATH?” - OCT SYMPOSIUM IN SINGAPORE

(continue from page 1)

Dr Koh: I think both systems have their individual strengths. The Stratus OCT remains easy to use, intuitive to interpret, and boasts a reliable normative database.

**Zeiss Connect: Many doctors are talking about 3D imaging of the retina. Is there any known and clinically validated treatment protocol for retinal diseases that is based on a simulated 3D image of the retina?**

Dr Koh: At present, none of the treatment protocols incorporate 3D parameters. With increasing awareness and usage of the Spectral-domain OCTs, I believe treatment protocols will ultimately incorporate 3D data.

**Zeiss Connect: What is the current role of 3D imaging in treatment and management of retinal and glaucoma related diseases?**

Dr Koh: As far as retinal diseases are concerned, I foresee applications in retinal and choroidal tumors, macular thickening due to macular oedema and neurosensory detachment, and perhaps volumetric assessments of macular holes and glaucomatous optic cups.

**Zeiss Connect: Could you please share with our readers what are some of the important factors to consider before making a decision to purchase an OCT?**

Dr Koh: I consider carefully the following factors when deciding on which OCT to choose: Technical reliability, availability of robust normative data, attentive after-sales service and track record of the manufacturer.

**Zeiss Connect: I understand that you have ordered a Cirrus HD-OCT for your retinal practice.**

Dr Koh: Yes.

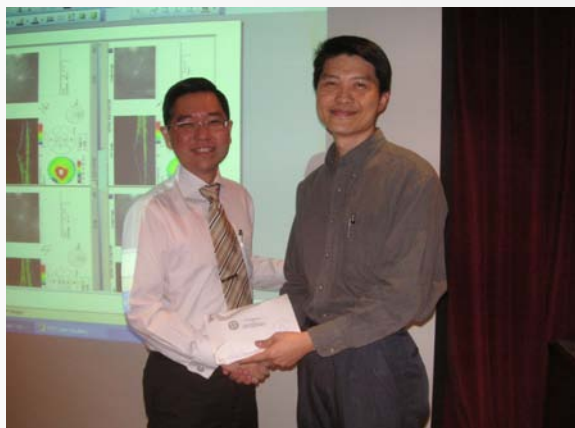
**Zeiss Connect: Dr Koh, thank you for your time and support.**

Dr Koh: It is my pleasure to share my thoughts on this subject with you. *zc*

(Dr Adrian Koh can be contacted at: [dradriankoh@eyeretinasurgeons.com](mailto:dradriankoh@eyeretinasurgeons.com))

**W**hat Lies Beneath? - a perfect phrase used to describe the sometimes “hidden” morphologies of retinal diseases beyond the reach of the human eye or even a fundus image.

The growing popularity and awareness of the OCT amongst eye healthcare professionals are obvious judging from the huge turn out of 34 doctors, 3 lecturers from Singapore Polytechnic School of Optometry and 8 practicing optometrists at Zeiss’ OCT symposium



Prof Lim presented a token of appreciation to Dr Koh

on the 18 April 2008.

This event took place at the Gleneagles Hospital Lecture Theatre. Organised by the College of Surgeon, supported by the Singapore Society of Ophthalmology and funded by Carl Zeiss.

Chaired by Prof Lim Tock Han, Dr Adrian H C Koh spoke at length the unparalleled role of the Stratus OCT in his retinal practice. When asked, “do you think that the Stratus Domain technology will make Stratus OCT obsolete?”

He replied that the Stratus OCT will still be the main stay for day to day clinical application.

**“Stratus OCT will still be the MAIN STAY for day to day clinical application.”**

Dr Nikolle Tan from TTSH (one of two S.E.A. Cirrus Early Access Sites) then spoke of the differences between image qualities of the Cirrus HD-OCT and Stratus OCT. Clearly at 5 micron axial resolution, the Cirrus HD-OCT was able to see more layers of the retinal and hence “What Lies Beneath?”

The panel of speakers then engaged the audience with questions and answers regarding treatment and management of retinal diseases. A handbook, “OCT Hands-On Reading - Pearls & Pitfalls” was handed out to each attendee where intriguing topics were discussed on the tips and tricks when using the Stratus OCT.

The event concluded with a sumptuous spread of buffet and of course, the evening will not be complete without doctors having hands on experience with the Cirrus HD-OCT. *zc*

## ADVANCING THE SCIENCE OF PROGRESSION ANALYSIS

The new HFA II-i System Software v4.2 now assesses progression status and graphically displays rate of progression using a new global index pioneered by Boel Bengtsson, PhD - the Visual Field Index (VFI)<sup>1</sup>.

### More Comprehensive Analysis with expanded backward compatibility

- Both Full Threshold and SITA exams are permitted for follow-up tests, helping you reap the benefits of GPA analysis right away

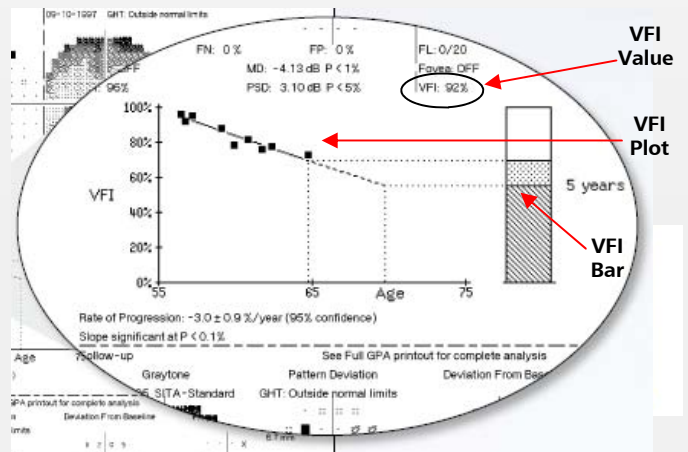
### More Convenient Analysis with the new Single Page GPA Summary Report

- Makes it easier to view a patient's entire visual field history so you can quickly appreciate stability versus change
- Clearly summarizes key information
- Includes both baseline exams and the current exam for easier visual comparisons
- Streamlines clinical interpretation and graphically provides an excellent patient education tool

### More Clinically Relevant Analysis

- New global index VFI is regressed to quantify rate of progression
- VFI filters out defects from other sources of vision loss such as from developing cataracts or aging
- GPA now guides clinicians to appropriate clinical information to assess severely depressed visual fields
- Attributes greater impact to visual field defects near fixation vs the periphery. This makes VFI more sensitive than mean deviation to functional vision loss due to glaucoma

### GPA Summary Report - VFI Plot & VFI Bar



<sup>1</sup> "A visual field index for calculation of rate of progression" by Boel Bengtsson & Anders Heijl, has been accepted for publication in *American Journal of Ophthalmology*

## How To Reach Us

Carl Zeiss S.E.Asia  
Medical Division  
50 Kaki Bukit Place  
#05-01  
Singapore 415926

Tel: (65) 6741 9600  
Fax: (65) 6842 7117  
Email: [medical@zeiss.com.sg](mailto:medical@zeiss.com.sg)  
<http://www.zeiss.com.sg>

