Taking digital dentistry to a whole new level

Dentist Dr Simon Kold on the new TRIOS digital impression solution from 3Shape (Booth B137–138)

The TRIOS digital impression solution with its new Shade Measurement and HD Photos features has generated much interest among dental professionals since being introduced for the first time at the Chicago Dental Society Midwinter Meeting in February. Challenged by a difficult tooth discolouration case, Dr Kold from Herning in Denmark had the opportunity to compare the new TRIOS Shade Measurement to a conventional method. In Worldental Daily, he reveals the results and discusses the potential of the feature for clinical practice.

**Fig. 1:** Prior to preparation of the tooth, a scan was performed and HD photographs were taken to capture the details of the original situation. **Fig. 2:** Scanning after preparation with an additional HD photograph for easy margin detection during design. **Fig. 4:** On the TRIOS screen, selecting the relevant areas on the neighbouring incisor displays the captured shade values that the laboratory can use to manufacture a matching crown. **Fig. 5:** The two crowns shade matched using TRIOS Shade Measurement (left) and a conventional shade-matching method (right). **Fig. 6:** Comparison of the two crowns in the patient's mouth. **Fig. 7:** The crown matched using TRIOS Shade Measurement was seated.

First of all, it is satisfying to know that I am equipped with a shade measurement solution that saves me an abundance of time and allows me to achieve results that are at least as good as the slower and less handy conventional method.

The great thing about the new TRIOS is that the Shade Measurement and HD Photos features allow me to easily convey so much more information along with the information from the digital impression. In our clinic, we have been taking almost all of our impressions digitally and the effects on our business have been enormous. The direction 3Shape is taking by adding other functionalities that can be performed while scanning is simply taking digital dentistry to a whole new level.

Dental photography made simple by SHOFU

For almost a century, SHOFU Dental (Booth C38–81) has been an international household name for dental clinical and lab products. However, the company has also been manufacturing and selling equipment for digital dentistry and photography, but only in its home market in Japan. With the introduction of the new EyeSpecial C-II, SHOFU brought a new digital camera to FDI 2014 in Greater Noida, exclusively developed for use in dentistry.

Made completely in-house in cooperation with experts in photography and cosmetic dentistry, the camera was conceptualized to be useful for a wide range of dental applications including intraoral photography, shade selection and detailed image taking of anterior teeth. It comes with eight pre-set dental modes, which according to SHOFU Dental's Asia-Pacific Managing Director Patrick Loke, are combined with a built-in proprietary flashmatic system and a number of image processing functions like colour-correction and auto-cropping to simplify the process of dental photography significantly. He added that the camera is extremely lightweight and features a large LCD touch screen display, making it possible for the user to operate it with one hand, leaving the other hand free for holding the mirror or cheek retractor. Another unique feature of the camera is that it enables photos to be transferred without any in-depth knowledge of dental photography to take accurate photos every time. The entire dental team, even in multi-specialty practices, will benefit from it,” Loke told Worldental Daily in Greater Noida.

Prior to its premiere here at FDI 2014, the camera has been showcased at large dental meetings in the US, China and Singapore. But now it is here, in India, that the EyeSpecial C-II was presented to a large community of South Asian dental professionals for the first time.

Dental photography is the most suitable event in India to launch the EyeSpecial C-II as it will give this unique product regional exposure in South Asia," explained Loke.

He said that further development into shade taking and restorative simulating functions is anticipated for the camera in the future.

In addition to the camera, SHOFU also has a number of products for restorative dentistry on display, including the universal direct aesthetic restorative, Beautifil Injectable and BeautiSealant, a product for sealing deep grooves and fissures without the need for a conventional phosphoric acid etchant.

“We believe that FDI 2014 is the most suitable event to launch the EyeSpecial C-II as it will give this unique product regional exposure in South Asia,” explained Loke.

**Fig. 3:** Scanning after preparation with an additional HD photograph for easy margin detection during design. **Fig. 4:** On the TRIOS screen, selecting the relevant areas on the neighbouring incisor displays the captured shade values that the laboratory can use to manufacture a matching crown. **Fig. 5:** The two crowns shade matched using TRIOS Shade Measurement (left) and a conventional shade-matching method (right). **Fig. 6:** Comparison of the two crowns in the patient's mouth. **Fig. 7:** The crown matched using TRIOS Shade Measurement was seated.

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VITA launches 4th generation of its electronic shade-taking device

With VITA Easyshade Advance 4.0, VITA Zahnfabrik has achieved a new milestone in digital shade determination. According to the German dental manufacturer, the device has been significantly enhanced to extend the number of applications for dental practices and laboratories. Both practitioners and dental technicians can now enjoy a perfect balance of proven system functionality and superior technology, the company said.

Improved from the already easy-to-use design of its predecessor, VITA Easyshade Advance 4.0 is intended to allow exceptional freedom of movement. New functions for automatic measurement activation have been integrated for optimal shade determination. Owing to its advanced measurement technology and durable light-emitting diode components, the device is said to offer precision that is twice as effective as that of the human eye. The results are displayed in VITA classical A1–D4 and VITA SYSTEM 3D-MASTER standards for shades. VITABLOCS shades can be specified as well.

Easyshade Advance 4.0 allows measurement data to be transferred to the VITA Assist communication software wirelessly via Bluetooth. Owing to its VDDS interface, clinicians are also able to connect the device to the practice management software of their choice. VITA said that the data for the exact display of whitening effects can be used in accordance with the international scale recommended by the American Dental Association, for example.

VITA ZAHNFABRIK, GERMANY
www.vita-zahnfabrik.com
Booth B74/B78

Dürr extends dental camera with interchangeable head

One of the main causes for approximal caries is food particles that are building up between teeth where patients cannot reach when cleaning their teeth. The same problem makes it difficult for dentists to diagnose this type of caries at an early stage. They are often recommended to take an X-ray to ensure that they detect any approximal caries in addition to examining the teeth with a probe. This exposes the patient to more radiation however.

In an effort to help dentists to detect approximal caries better and in a non-harmful way, Dürr Dental has recently extended its dental camera system Vista-Cam iX with an optional interchangeable optical head. According to the German dental manufacturer, the new optical device is boasting infra-red technology to aid diagnosis without further exposure to radiation. The instrument is positioned above the occlusal surfaces of teeth and the two adjacent teeth, premolar or molar, are lit by two infra-red LEDs. Owing to the pre-set wavelength, the dental enamel becomes slightly transparent when healthy or takes on a light-coloured, opaque appearance when caries lesions are present. This way, any approximal caries becomes instantly visible and can be treated, the company said. Images or video captured with the system can be saved in the DBSWIN imaging software.

DÜRR DENTAL, GERMANY
www.duerr.de
Booth B74/B78

AD

One day can change your life

Advance technology. Shape your dental future.
The All-on-4 treatment concept by Nobel Biocare was developed to provide edentulous and soon-to-be edentulous patients with an efficient and effective restoration that uses only four implants to support immediately-loaded, fixed full-arch prostheses. This can be achieved by tilting the two posterior implants, so that longer implants can be used in reduced bone volume, thereby increasing bone-to-implant contact and reducing the need for vertical bone augmentation. As tilted posterior implants can be anchored in better quality anterior bone, cantilevers are also reduced, according to the Swiss manufacturer, improving support for the prostheses. Moreover, there will be less need for bone augmentation.

Supported by almost 15 years of clinical success, Nobel Biocare said that the All-on-4 treatment concept offers a reliable solution for patients looking to escape the discomfort that so often comes from wearing removable dentures. Cumulative 5-year implant survival rates of 98 per cent have been documented for the concept in both jaws for almost 10 years and overall published data on the All-on-4 treatment concept shows cumulative survival rates of between 92.2 and 100 per cent.

According to Nobel Biocare, the All-on-4 treatment concept can be used in a wide range of cases. Owing to the high initial stability offered by implant innovations such as NobelSpeedy and NobelActive, Immediate Function can be achieved safely even in patients exhibiting severe bone resorption, the company said. Furthermore, it claims that the concept can also be adapted to incorporate zygomatic implants in cases where patients have severely atrophic maxillae.

The All-on-4 treatment is also said to provide flexibility when it comes to prosthetics. Options for the final restorative solution include fixed prostheses such as the NobelProcera Implant Bridge Zirconia or Titanium with acrylic or composite veneering as well as individual NobelProcera Crowns cemented to the NobelProcera Implant Bridge framework. Removable solutions are also feasible such as an acrylic overdenture on a NobelProcera Implant Bar, for example.

Since accurate placement is essential, Nobel Biocare recommends guided surgery with NobelGuide for All-on-4 treatment concept cases. Diagnostics and treatment planning are supported by the NobelClinician Software. By using the radiological data set with 3-D models of bone and the radiographic guide in combination, clinicians can assess the quantity and quality of the bone available, says the company. Vital anatomical structures such as the alveolar nerve and the maxillary sinus can also be marked so that prosthetic-driven planning can be conducted with yet unknown limitations. In addition, the split-screen view in the software allows the user to control and customise the angulation of the dental reslice planes, a feature that assures the tilted posterior implants required for the All-on-4 treatment concept are positioned perfectly. After the planning in NobelClinician is completed, ordering a ready-to-use surgical template and all the components required for the surgery is just a few clicks away. The NobelGuide surgical template enables guided implant site preparation as well as safe, accurate implant insertion, minimizing pain and swelling for the patient.

Nobel Biocare said that the surgical template can also be used to begin developing fixed temporary prostheses prior to surgery. It enables the creation of a stone model with implant replicas in advance, which means the dental technician can also produce the abutment placement jig and the fixed provisional prostheses ahead of time. All that remains is for the clinician to finalise the prostheses for mounting on the implants immediately after surgery.

NOBEL BIOCARE, SWITZERLAND
www.nobelbiocare.com/all-on-4
Booth B109–116

Nobel Biocare highlights All-on-4 treatment concept at FDI ADWC
Belmont leads the way with a totally new generation of dental treatment centre.

Belmont has combined cutting edge technology with traditional values for a dental treatment centre that offers sophistication, performance, flexibility and above all durability.

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Clesta-II E Holder type
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Temporary gingival retraction enhanced

Bleeding or oozing sometimes makes the process of taking dental impressions difficult or even impossible. Replacing all conventional techniques for opening the sulcus, Expasyl from Acteon promises to open the marginal gingiva without damaging the epithelial attachment.

According to the French manufacturer, the technique is simple and fast as well as totally painless for the patient. Without the need for anaesthesia, clinicians can have a quality subcutaneous opening in only two minutes, the company said. After the removal of Expasyl, they are left with a clean clinical site, ideal for taking a perfect impression. The risks of gingival recession and bone resorption, owing to trauma caused to the epithelial attachment, can be eliminated. The aluminium chloride and kaolin contained in its formula also give Expasyl astringent and haemostatic properties.

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PLANNEC, FINLAND
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Booth C36–47

Planmeca Ultra Low Dose is a new imaging protocol that is supposed to allow CBCT imaging with an even lower patient radiation dose than standard 2-D panoramic imaging. It is based on intelligent 3-D algorithms, according to Planmeca, and offers a vast amount of detailed anatomical information at a very low patient dose. Two-dimensional imaging, therefore, can no longer be justified, the manufacturer said.

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Planmeca Ultra Low Dose is available with all Planmeca ProMax 3D imaging units. According to the manufacturer, images taken with the imaging protocol can be used for a large variety of clinical cases, such as postoperative and follow-up studies in maxillofacial surgery, orthodontics, implant planning, as well as ENT studies.

PLANMeca, FINLAND
www.planmeca.com
Booth C36–47

CBCT imaging with lower doses

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According to the representative, the protocol also had a significant impact on patients. “We often found that they were concerned about radiation exposure, but once they hear that the dose is even lower than in traditional panoramic 2-D imaging, they are always relieved. Also, referring physicians often specifically ask us to use the Ultra Low Dose protocol," he said.

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