

## PRESS RELEASE

### **SICAT Air: First completely digital 3D analysis and treatment of obstructive sleep apnea**

*SICAT Air is the first 3D solution to combine the fully digital volume tomography analysis of the airways with treatment. From the combination of DVT and digital surface data of the upper and lower jaws, SICAT Air makes it possible to plan and produce a protrusion appliance.*

**Bensheim/Salzburg, March 13, 2015.** Patients who suffer from dangerous sleep apnea, which affects around one out of ten adults, do not necessarily need a breathing mask at night. A treatment appliance that protrudes the lower jaw can often help. With SICAT Air, the patient's upper airways are first examined in the 3D volume. Based on this, treatment with an appliance can be planned and predicted according to the actual anatomical situation, including the temporomandibular joints. The complete process from examination to production of an appliance can now be completely digitally visualized for the first time. SICAT Air makes it possible for dentists to use their SIRONA DVT unit and CEREC to add a new, cost-effective indication to their range of treatments and gives them a unique selling point.

For planning the appliance, anatomical data on the airways with the jaw protruded is registered in a 3D x-ray scan. This data can tell the dentists whether treatment will have an adequate effect. By selecting the corresponding volume, the temporomandibular joints can also be evaluated in a protruding position minimizing the risk of temporomandibular and functional disorders (cranio-mandibular dysfunction), muscle tension, or changes in the bite over the long term. In the next step, the dentist records the digital surface data of the two jaws using CEREC and merges this data with the DVT data in the SICAT Air software. The protrusion appliance for the lower jaw (SICAT OPTISLEEP) can then be ordered from the software by transmitting the data to SICAT. No physical model is needed, but can be sent instead of the optical data if desired.

#### **Suitable treatment for many patients**

The need for solutions such as this is evident from the number of those affected, which is greater than frequently assumed. In the sleep laboratory in Heidelberg, it is assumed that two to four percent of adults are affected by this condition. In middle to old age, the frequency is between 15 and 19 percent in men and between 9 and 15 percent in women. Being overweight is also a risk factor. The problem is that people who suffer from breathing interruptions at night wake up stressed the next morning. This not only increases the risk of an accident, but also the risk of cardiovascular diseases, diabetes, and many other disorders. The protrusion appliance for the lower jaw can provide considerable relief in many cases. This has been proven in studies.

SICAT OPTISLEEP gives dentists a treatment option that can be implemented completely digitally and can be made available to the patient quickly, in just two appointments. The appliance fits perfectly, is more comfortable to wear than a breathing mask, and thus ensures high patient compliance and the corresponding success of treatment.

SICAT Air will be available starting in the summer of 2015.

#### **About SICAT**

SICAT is an innovative company founded in 2004 as a joint venture between HICAT GmbH, a spin-off of the caesar research center, and Sirona Dental Systems GmbH. Working in three-dimensional imaging with a selection of products and solutions for dental implantology, functional diagnostics and treatment, as well as oral & maxillofacial surgery, SICAT focuses on the development of user-friendly and cost-effective software and hardware.

Due to the different approval and registration times, not all products are immediately available in all countries.

#### **SICAT and Sirona at the IDS:**

Hall 10.2., Aisle O/N No. 10

#### **IMAGES**



Fig. 1: SICAT OPTISLEEP: The protrusion appliance designed and produced with data from the 3D volume and the digital scan of the tooth surfaces.

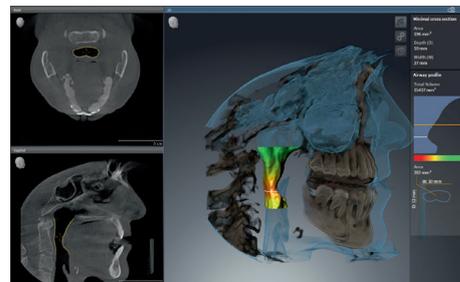


Fig. 2: SICAT Air makes it possible to analyze the airways in the 3D volume and use this as a planning basis for a treatment appliance.

**SICAT.**

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The Dental Company