



SDiMatriX

SDiMatriX

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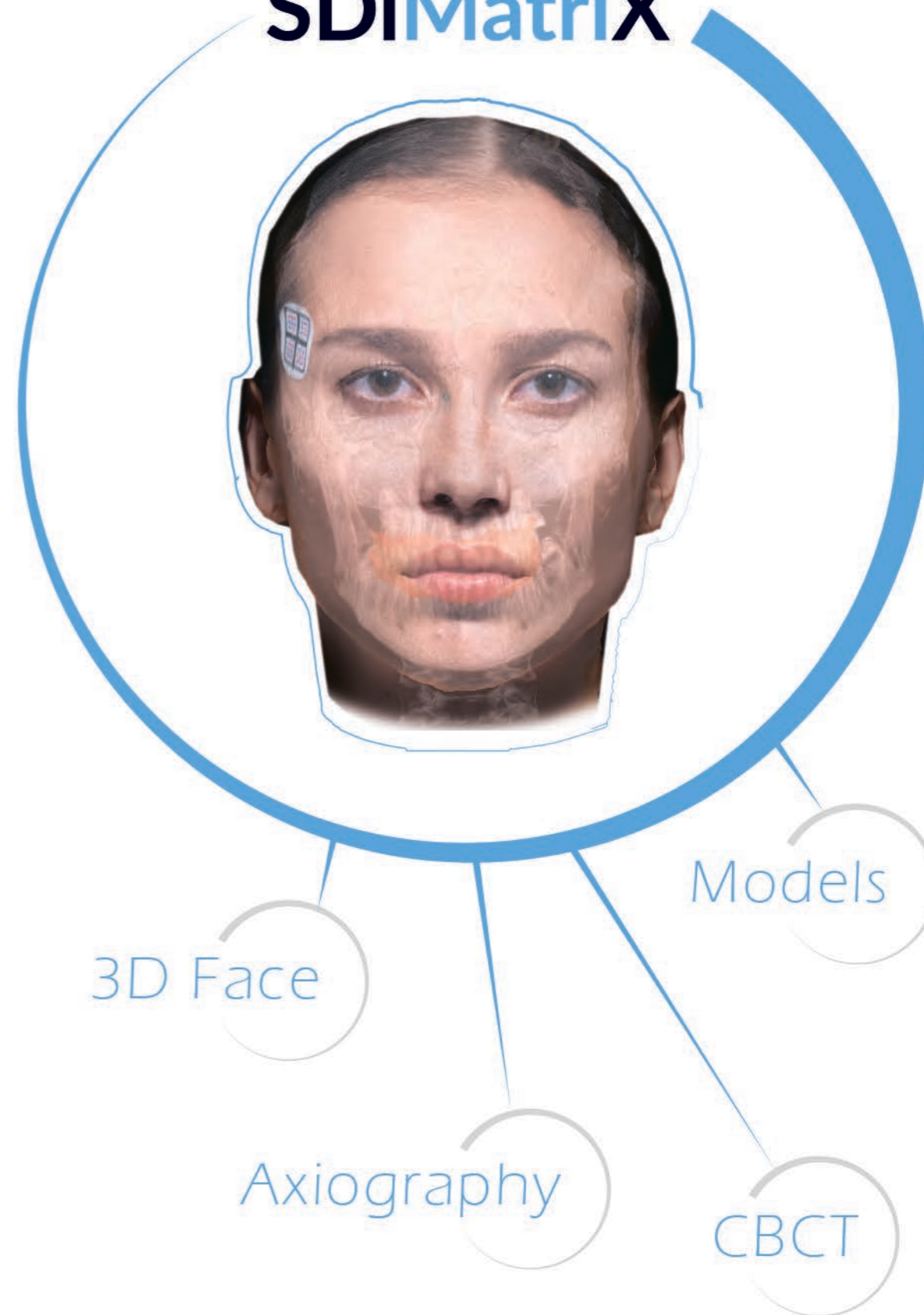
FUNCTIONAL
a e s t h e t i c s

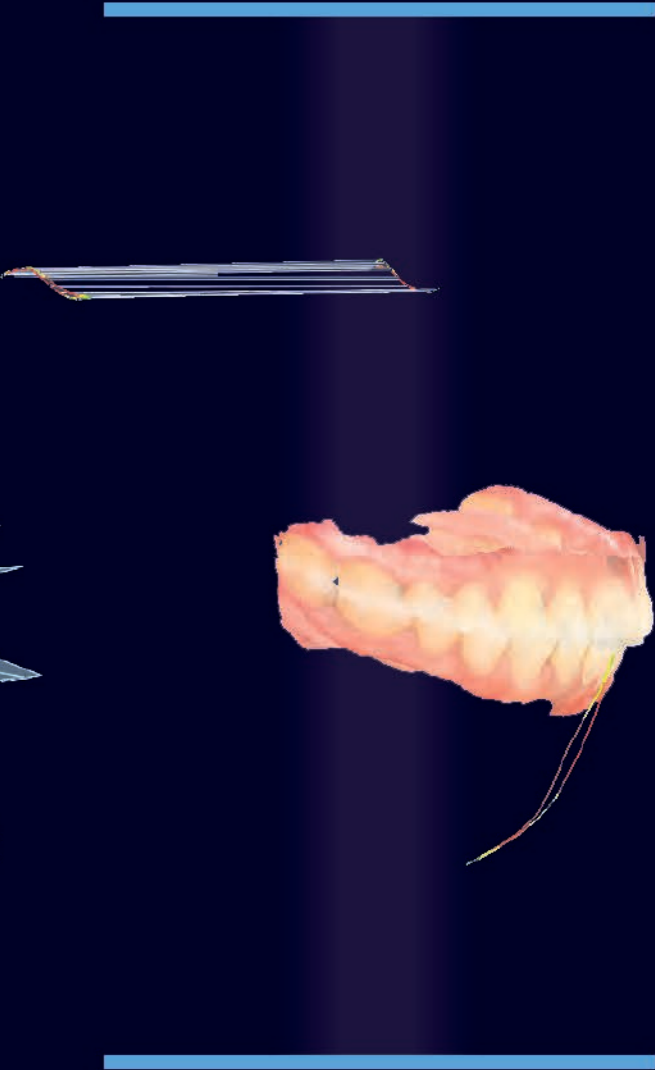
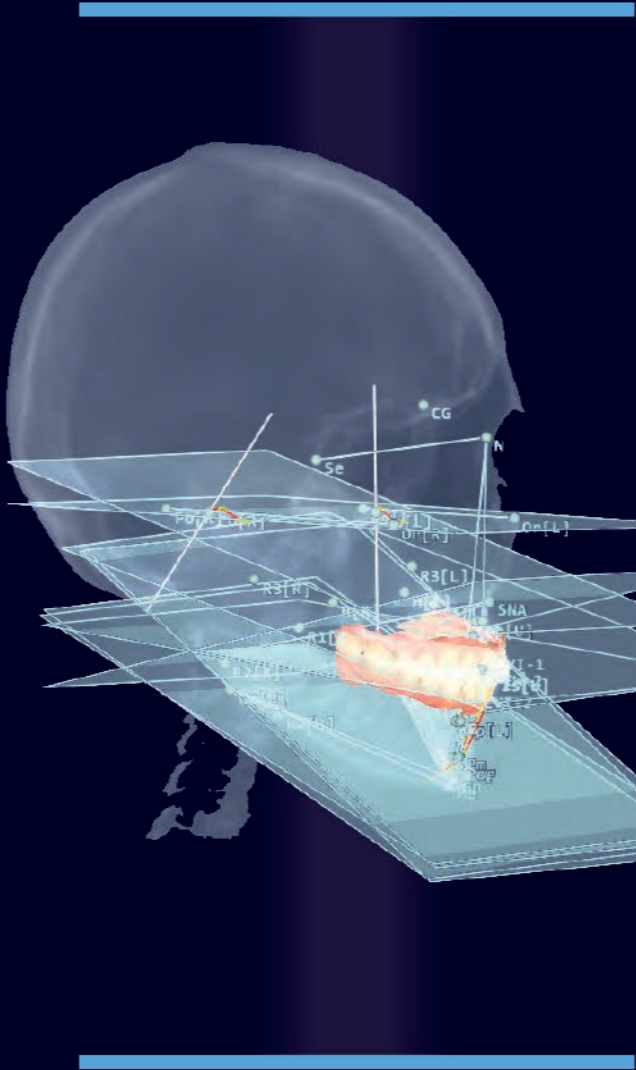
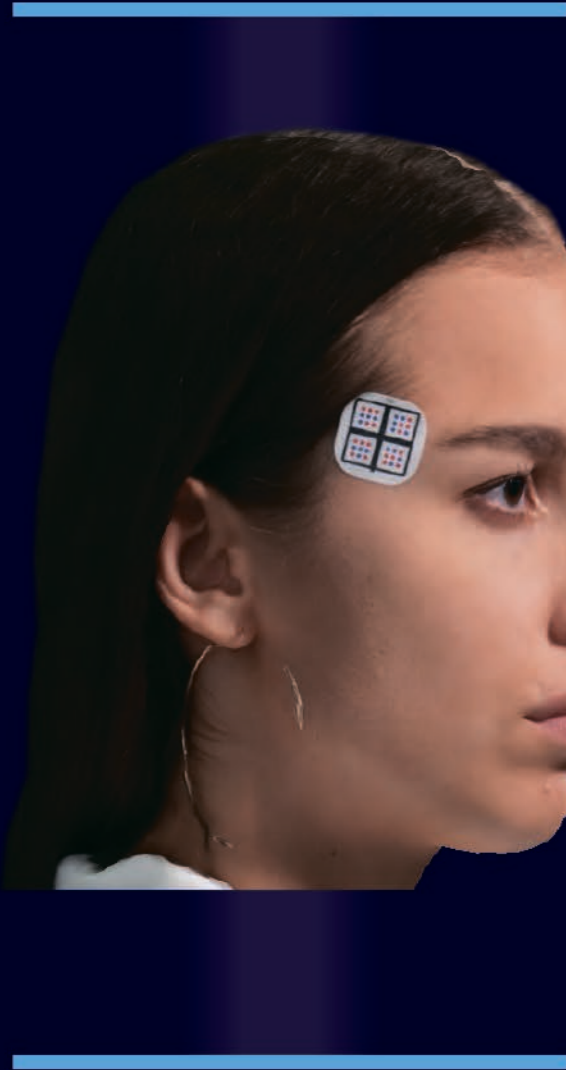
Individualized digital protocols in
diagnosis and treatment planning

SDiMatriX GmbH (Zurich)

Diagnostics & Dental service

SDiMatriX





Individualized digital protocols in diagnostics



SDiMatriX

ProAxis



ELECTRONIC
OPTICAL AXIOGRAPH
PROAXIS

1 camera is enough to record any movements of the lower jaw



Simple fixation on the patient's head



Hexapod - stand for individual transfer of models to the articulator



Digital facbow



Side markers for axiography

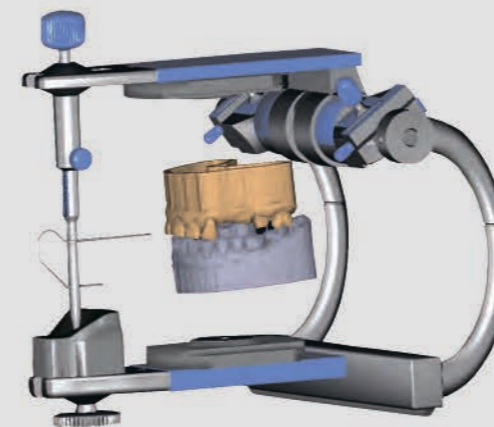


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Getting data for virtual and analog articulators

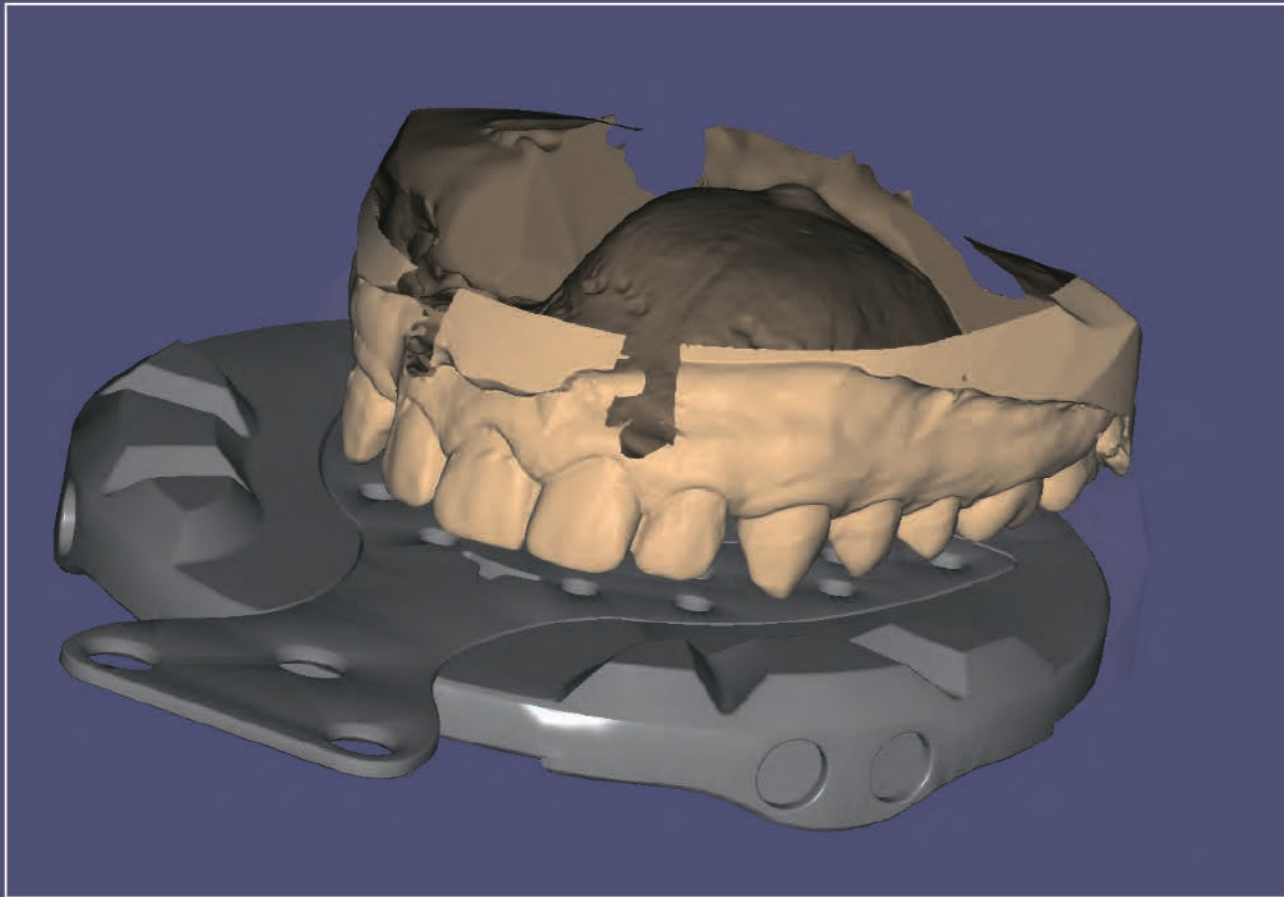
Plaster in the articulator according to individual parameters

Plastering according to the CBCT data



Export of models to a virtual articulator according to individual parameters

Using data to configure the articulator



EXPORT THE NECESSARY DATA TO THE EXOCAD

Working in the full digital protocol of the models + axiography

The screenshot displays the SDiMatrixX software interface. On the left, a 'Wizard' panel titled 'Virtual Articulator' offers options to 'Start virtual articulator now' or 'Load jaw movement data from file'. The main workspace shows a 3D model of the dental arch. On the right, the 'Jaw Movement' window is active, featuring a 'SELECT MOVEMENT TYPE' dropdown set to '1: "spontaneous"', a 'DRAG SLIDER TO MOVE JAW' control, and a 'GENERATE VIRTUAL IMPRINT' button. Below these controls is a '2D MOVEMENT INSPECTION' grid with columns for 'Left', 'Incisal', and 'Right' and rows for different movement types. The grid contains colored lines representing movement paths. At the bottom right, the 'exocad' logo and navigation arrows are visible.



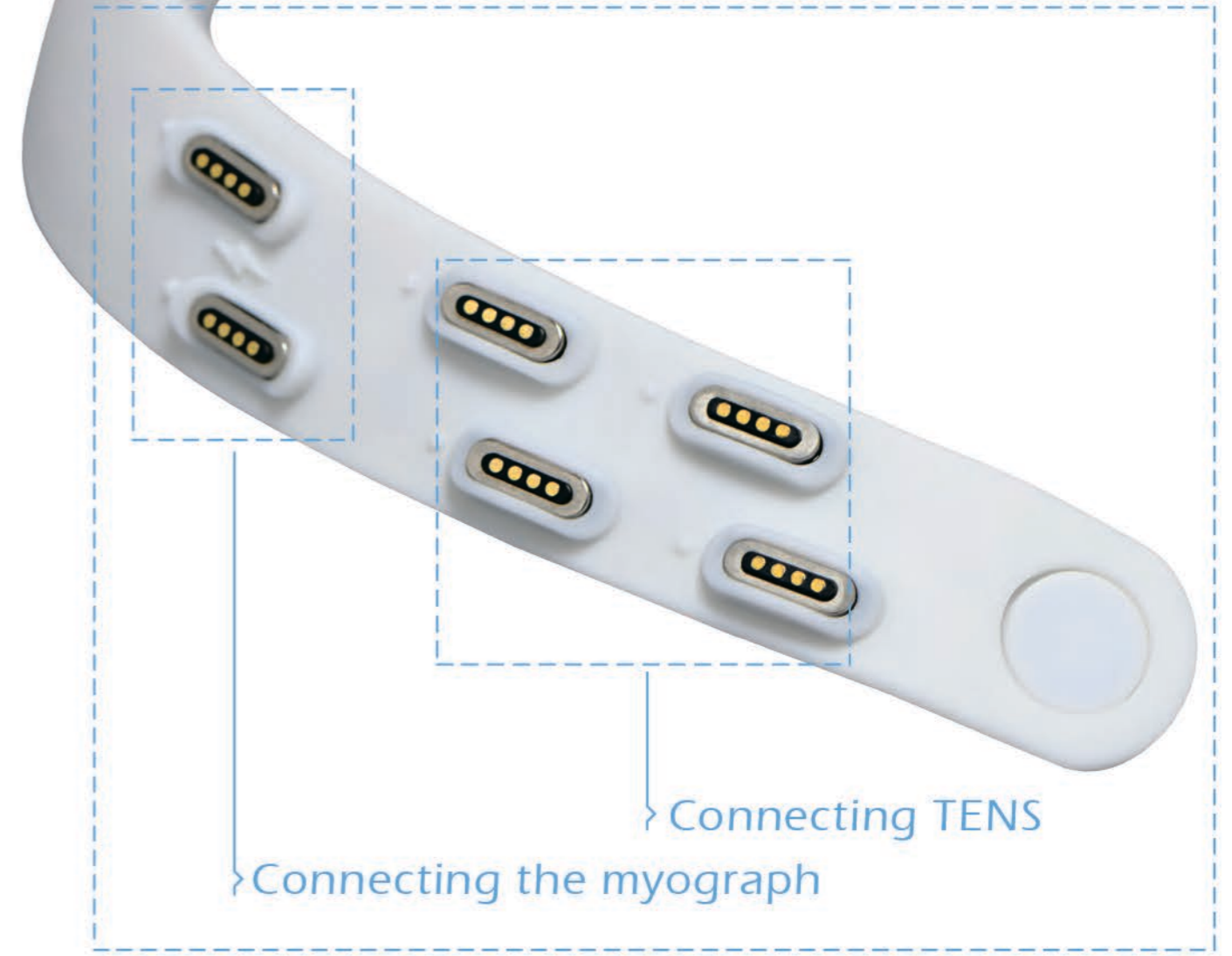
ProTens



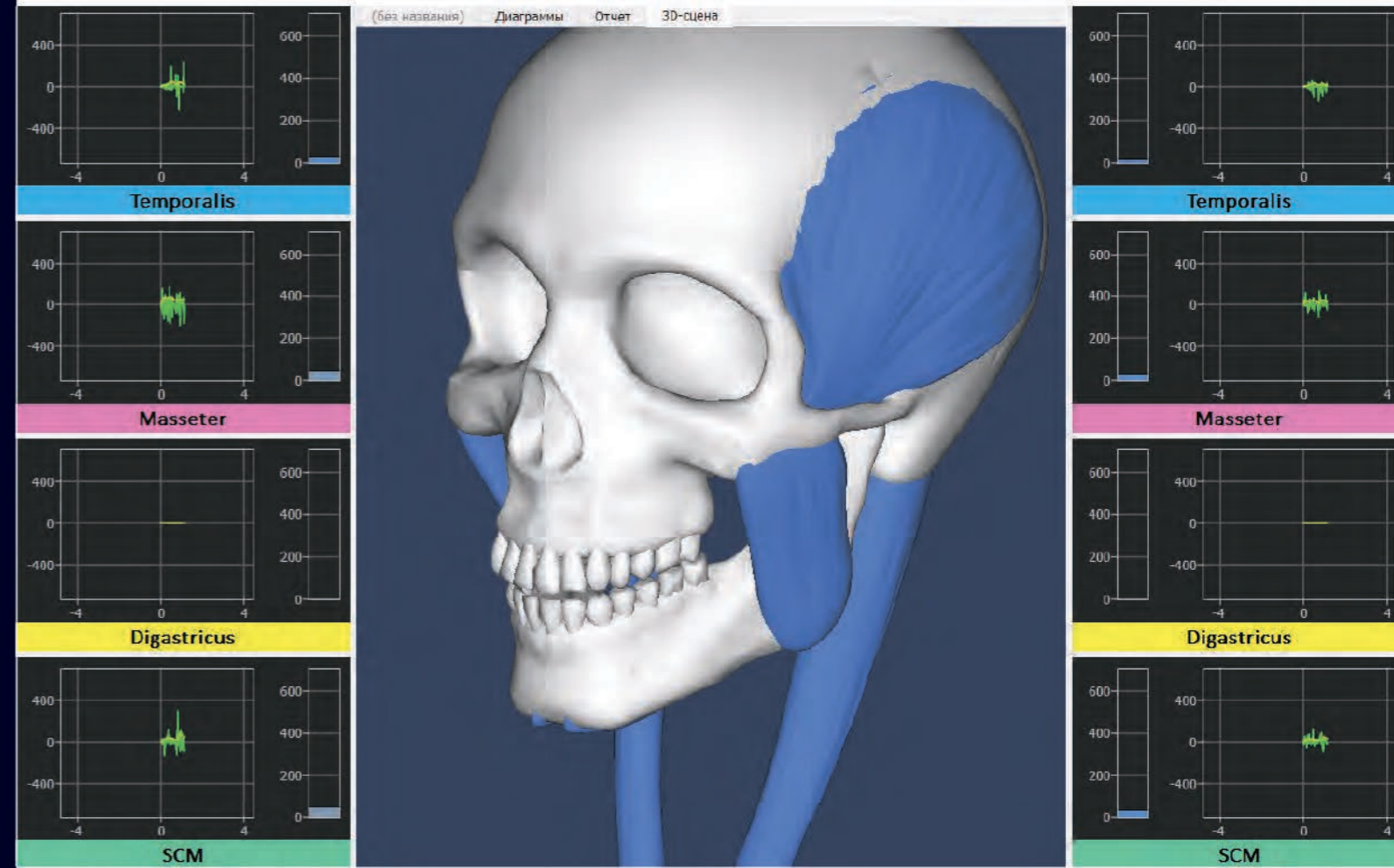
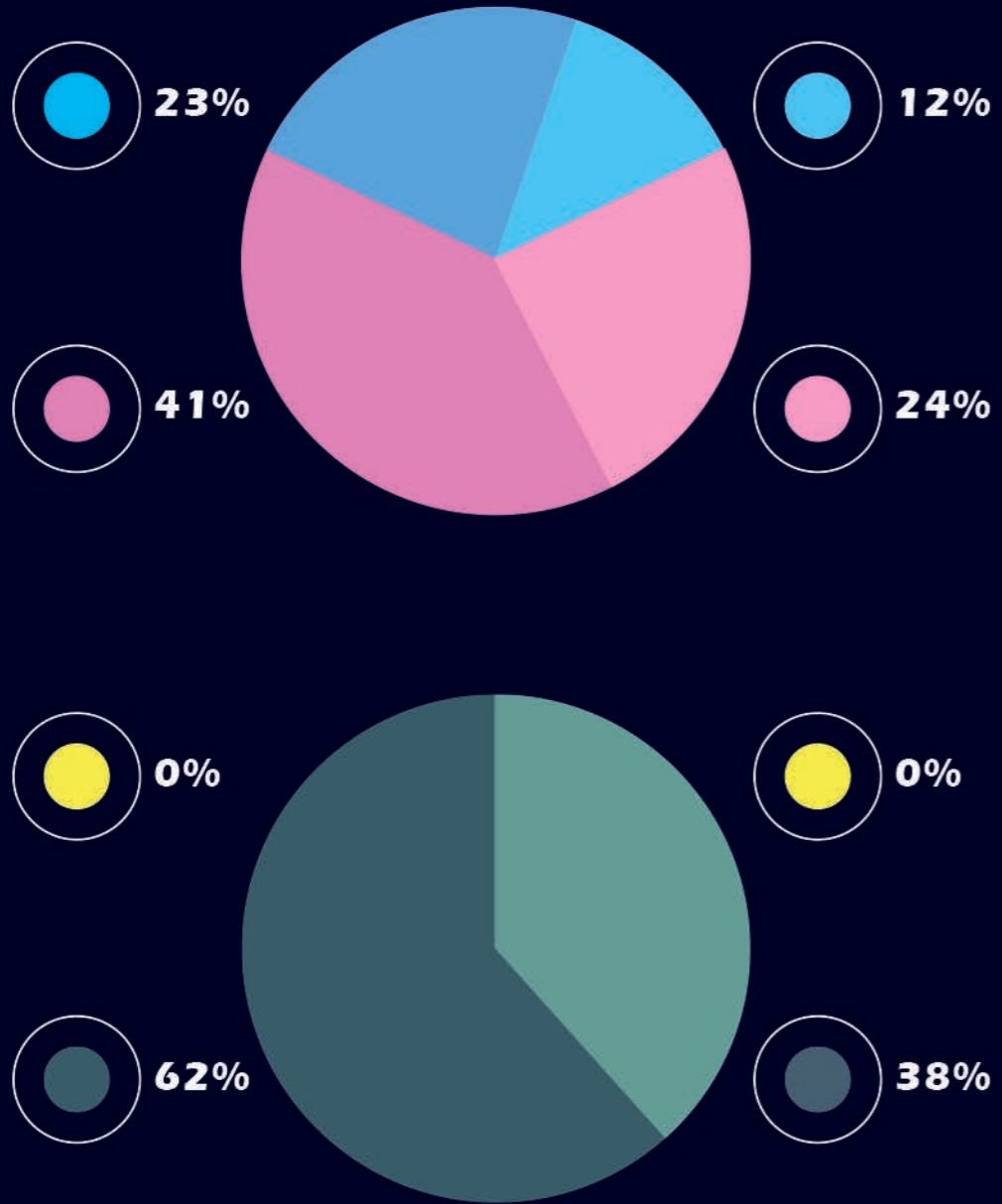
MYOGRAPHY + TENS

8-channel electromyograph

SDiMatriX

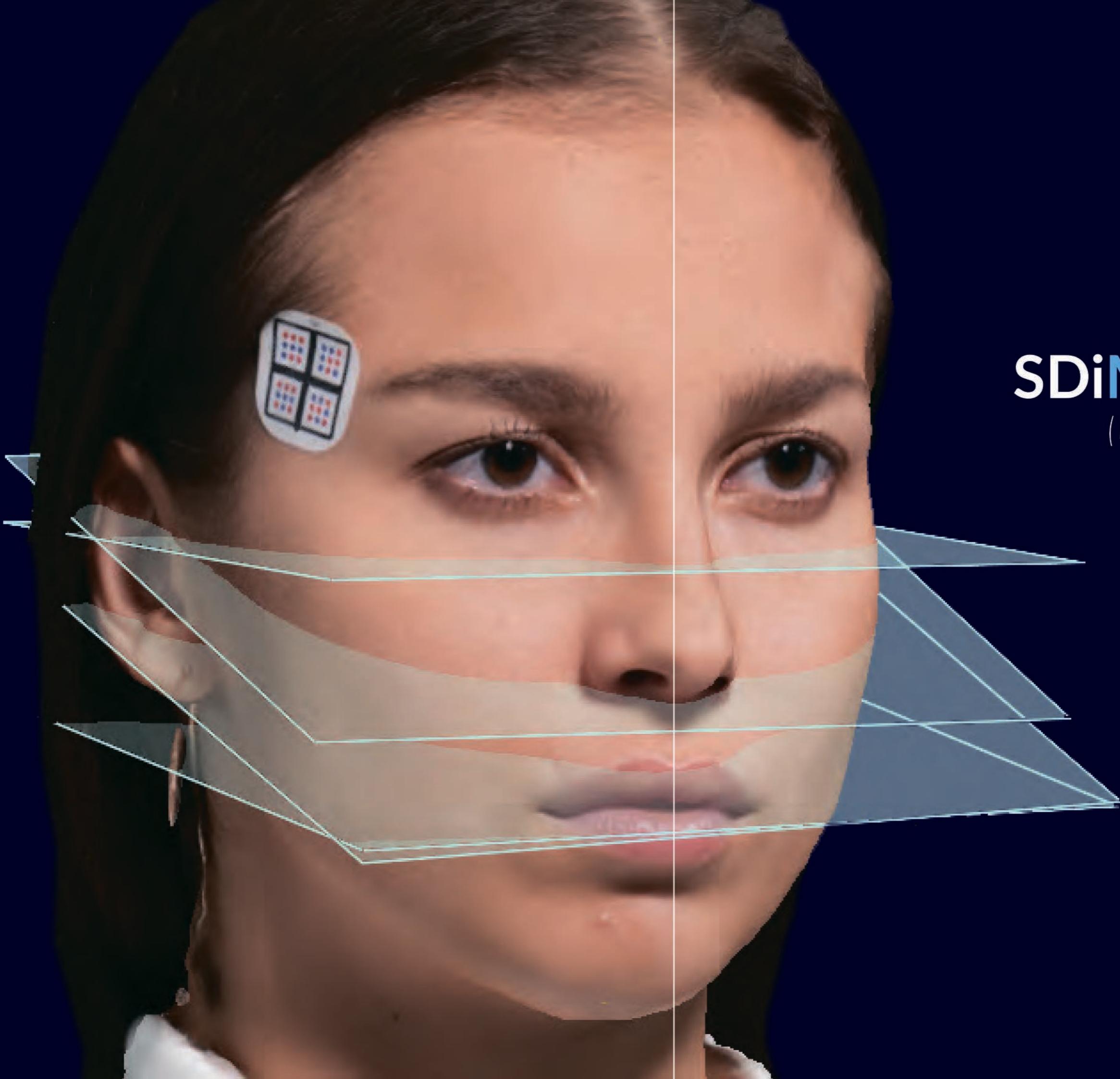


Special magnetic connectors simplify the assembly and connection of the device



Visualization of the shape of the muscular system

Temporalis
Masseter
Digastricus
Sternocleidomastoideus



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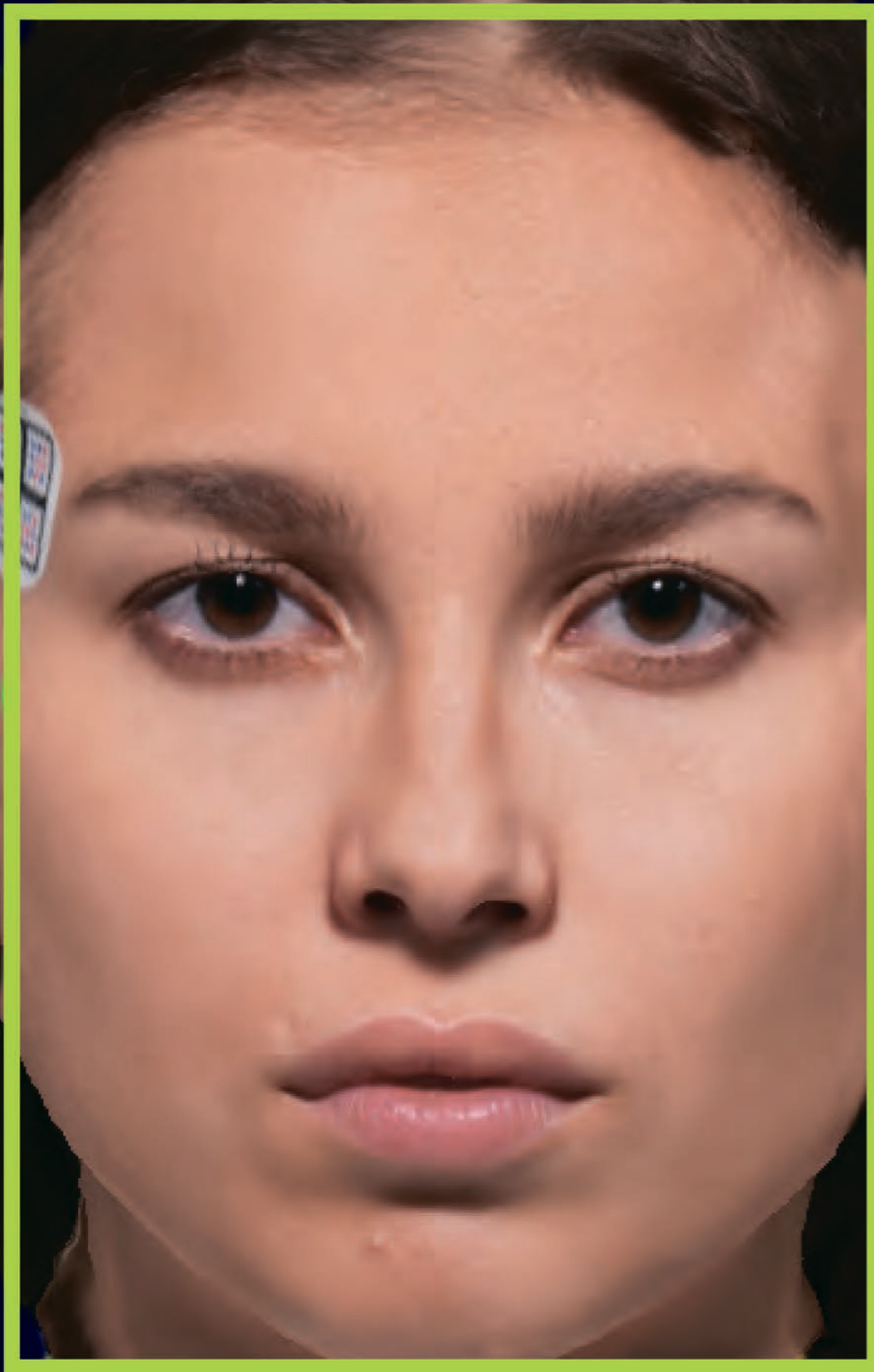
(module)

THE RATIO OF LENGTH AND WIDTH OF THE SKULL + COMBINATION OF RESEARCH RESULTS:

CBCT & INTRAORAL SCAN & AXIOGRAPHI & FACE SCAN:

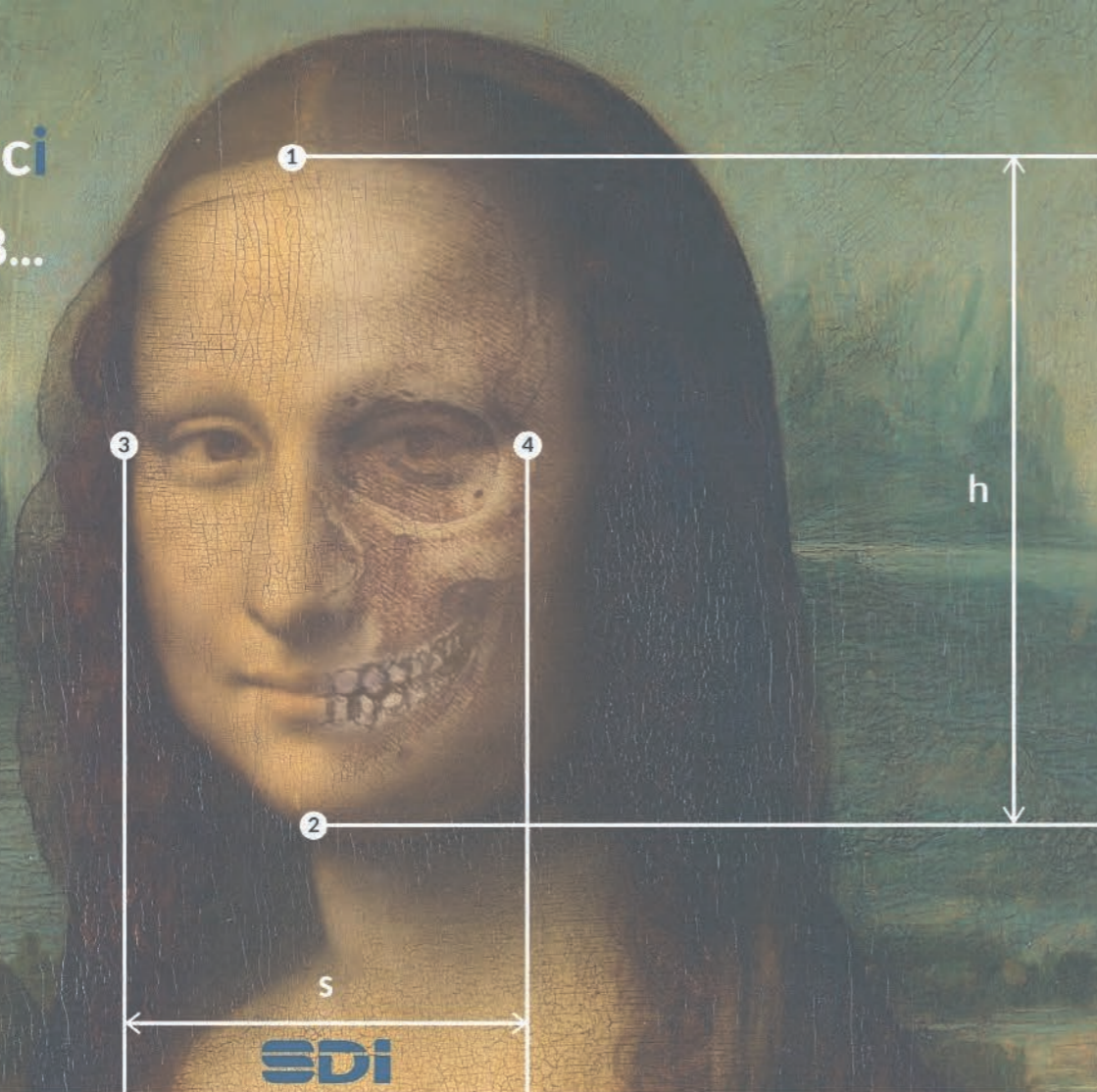
and calculation of a mathematical algorithm for the gradual displacement of the position of the mandible, taking into account individual parameters and offset the balance of the myostatic reflex to restore the geometric proportions of the shape of the skull and face of the patient. Export STL.

- 1 / Building a 3D face according to the photo protocol
- 2 / Export a face scan in stl / obj format to modeling programs
- 3 / Aesthetic, craniometric, cephalometric analysis of the face.
- 4 / Dynamic analysis of the face with displacements of the lower jaw
- 5 / Comprehensive analysis of the scan of a face with a smile and scans of models of dentition.
- 6 / Correction of the face scan in the smile area. / in development /
- 7 / Comprehensive analysis of the scan of a face with a smile and scans of models of dentition. / in development /
- 8 / Analysis of violations of the proportions of the face. Calculations and visualization of a new face shape before the start treatment.



Smile Da Vinci

5 $h/s = 1,618...$



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Smile is just an optical illusion, and if you look into the eyes of MONA LISA, it creates the impression of a smile. The Great Master was able to achieve an incredible smile effect, including due to the observance of ideal geometric proportions of the face, but if you will graphically slightly change the proportions of the face the "Smile" disappears. ®

The rate of change of proportions in the geometry of the skull depends on the rate of abrasion of the tooth enamel. Professor Leontiev investigated this phenomenon, and experimentally established that the enamel of the teeth is being eroded with each meal, by a certain value, and after restoring the PH of the saliva of the oral cavity, the enamel of the teeth is restored by a certain value.

"THE PARADOXICAL FINDINGS OF THE RESEARCH LIES IN THE FACT THAT THE RATIO OF CHANGES IN THE DIRECTION OF ERASABILITY OF THE TEETH ENAMEL IS ALWAYS THE SAME 1,618... THE GEOMETRY OF THE SKULL CHANGES WITH EACH MEAL IN A STRICTLY DEFINED RATIO-REDUCING THE HEIGHT OF THE FACE AND SKULL LEADS TO AN INCREASE IN WIDTH, THESE CHANGES OCCUR DAILY BY A SMALL AMOUNT AND ARE INVISIBLE".

The support of the temporomandibular joint are the teeth, and they are eroded - "sagging", the head of the joint, by means of chewing muscles started to bring excessive pressure on the walls of the articular hillock of the temporal bone, the balance is disturbed and the excessive force vector provokes an elusive expansion of the skull and face. The target of this mechanism is the tension lifting from the temporal and latticed bones of the skull on which the medulla oblongata "sits", the system thus comes into balance on a new level.

The phenomenon of the teeth enamel erasability is a mechanism for controlling the rate of changes in the geometry of the face skull and brain, which leads to "myopia of the epiphysis" and as a consequence to the activation of both phantom genes and mutations. A sudden increase of the bite gives short-term effect, because the articular slope of the temporal bone consists of lamellar bone thus the head of TMJ consists of spongy bone and it is causing violations of anatomy and the function of TMJ joint ... "The perfect face"- the width of the face makes exactly 1.618 of the length of the face, the distance from the eye line to the mouth line is 35% of the length of the face, the front tooth is 1.618 wider than the next. Knowledge of the individual parameters of the TMJ, and mathematical algorithms of step by step increase of bite, enable the dentist to restore and keep the "ideal parameters" of the skull and face of the patient, which automatically leads to the restoration of the energy system of the brain, and this is clinically manifested by the absence of the syndrome of "unreasonable anxiety", the predominance of positive thinking, improving both moral and physical health, reducing the activity of phantom "perception of time". Perception of time is a sign of space, and each person interprets this value differently.

"THE FACE, THIS WELL-DESIGNED AND EVER CHANGING MIRROR PICTURE OF THE LIFESTYLE AND PERCEPTION OF TIME. AND IF WE RESTORE THE SKULL SHAPE TO THE CORRECT RATIO, WE WILL SLOW DOWN THE FLOW OF TIME IN THIS PERSON'S BRAIN, AND IT MUST BE REMEMBERED: THAT ANY HYPOTHESIS IS GOOD ONLY IF IT IS CONFIRMED BY MATHEMATICS"

SMILE DA VINCI WHETHER MONA LISA SMILE, OR SHE'LL SMILE, AND THAT MOMENT HAS NOT COME YET ... IN THE PICTURE WE "SEE" FUTURE, UNDERSTANDABLE NOT WITH THE EYES BUT WITH THE MIND, AND COMPREHENSIBLE ONLY TO THE LANGUAGE OF SOUL.

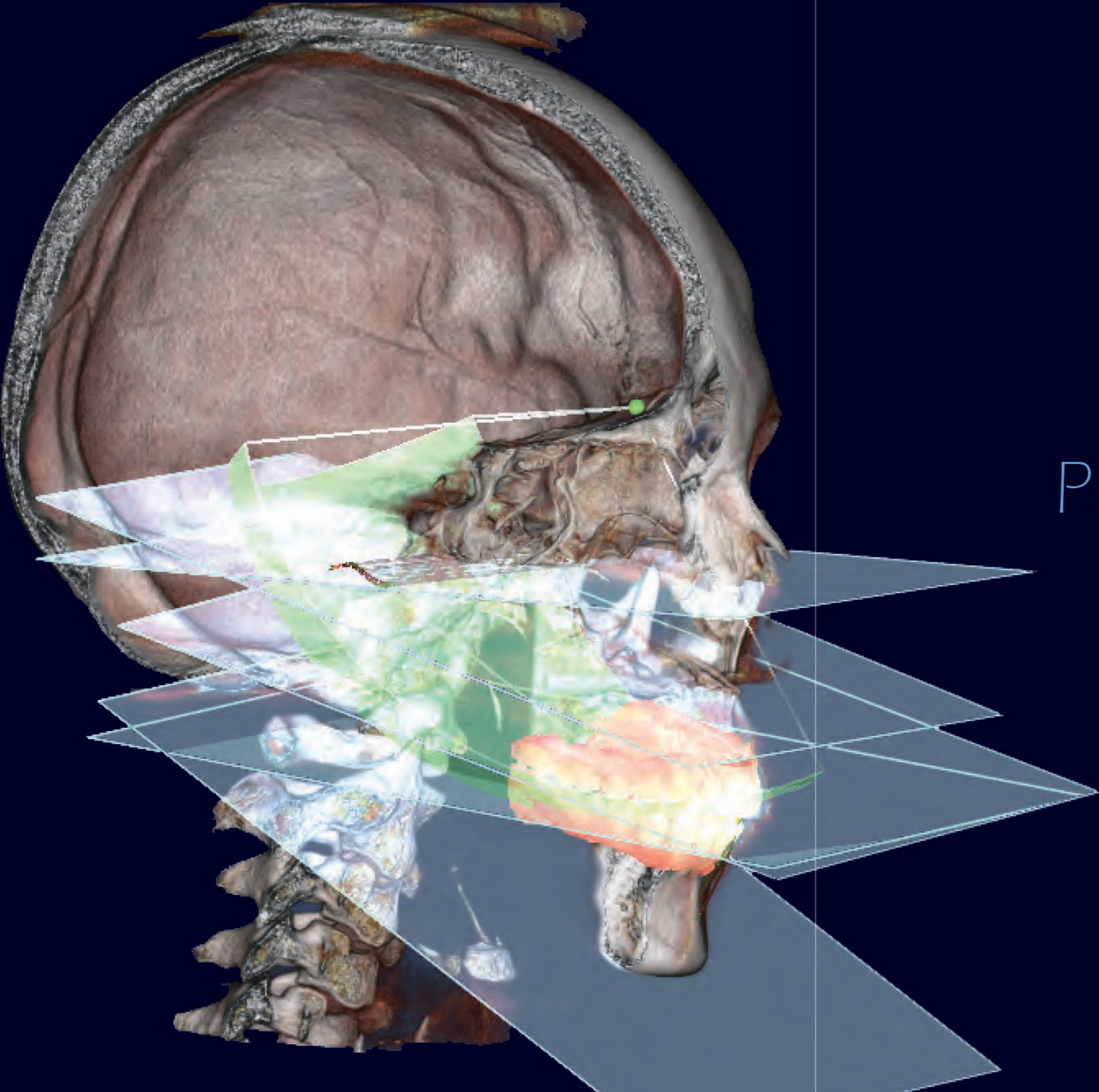
- Leonardo Da Vinci



BEFORE

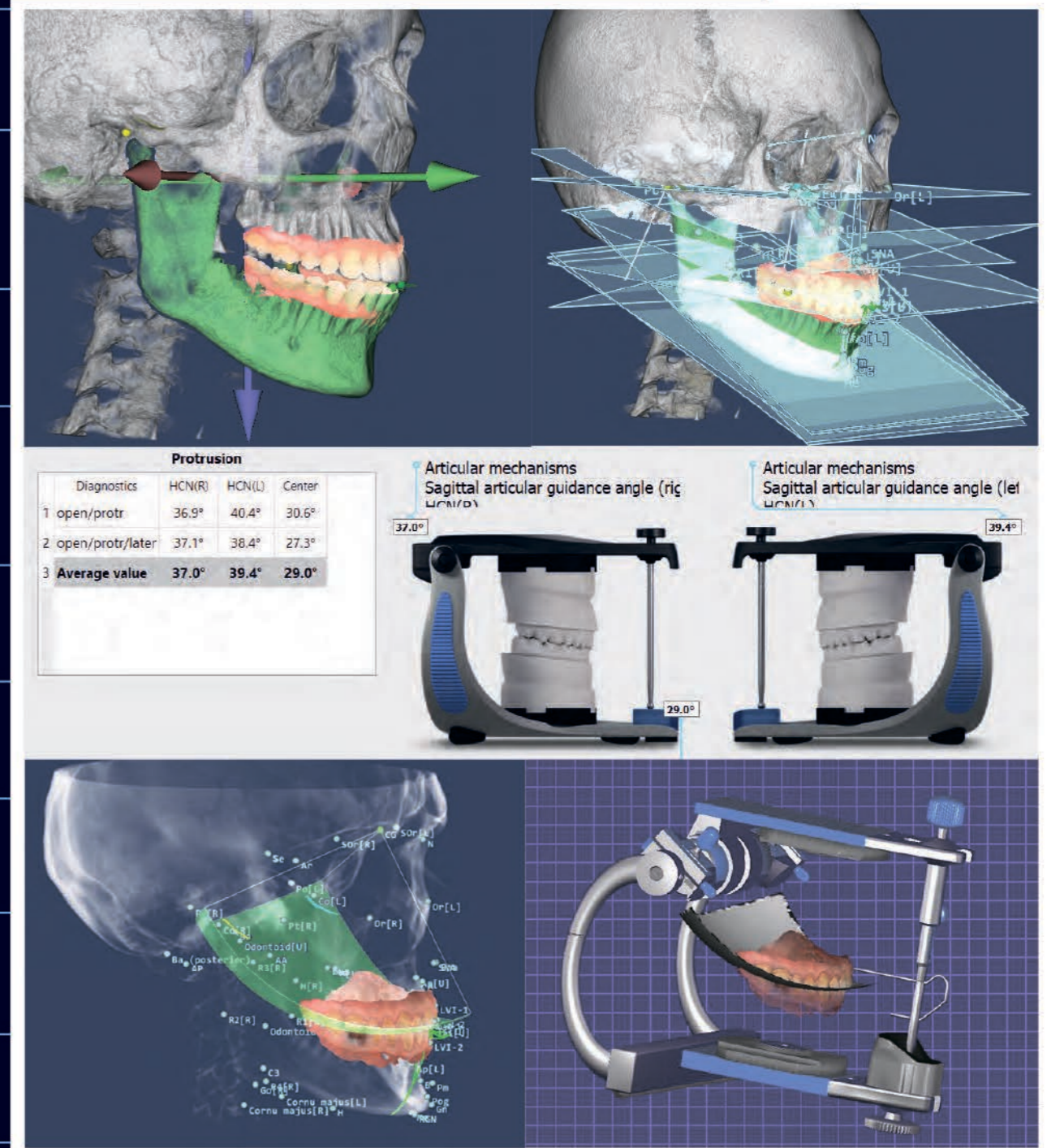


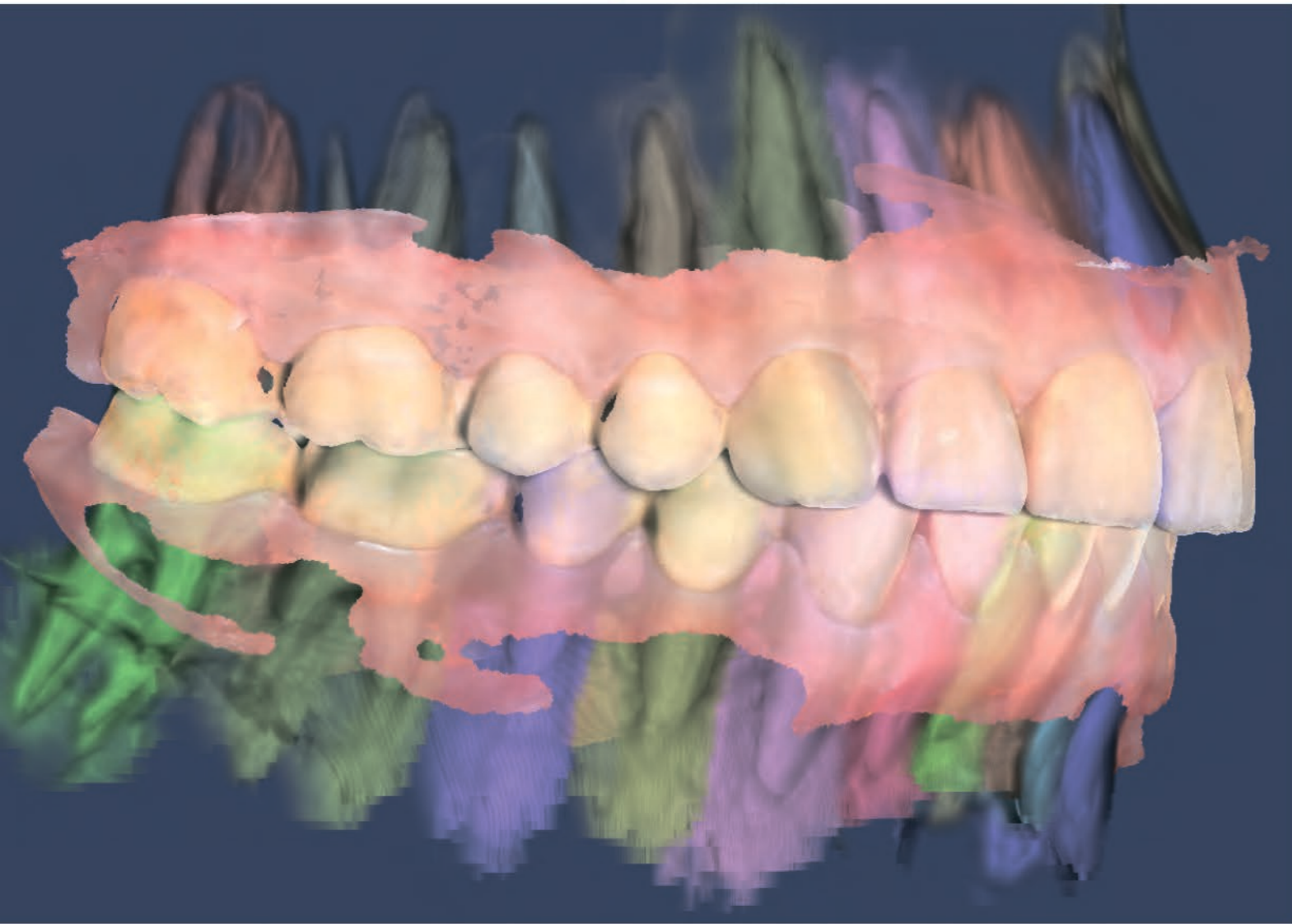
AFTER



Prosthetics (module)

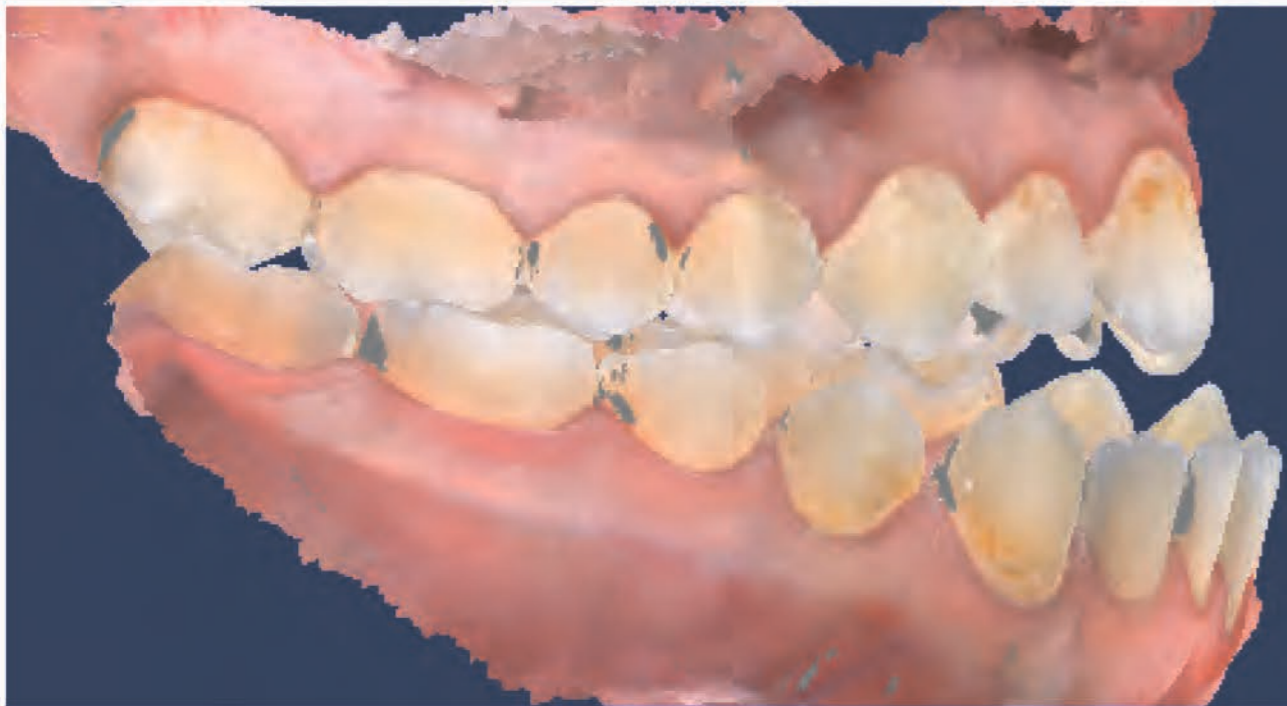
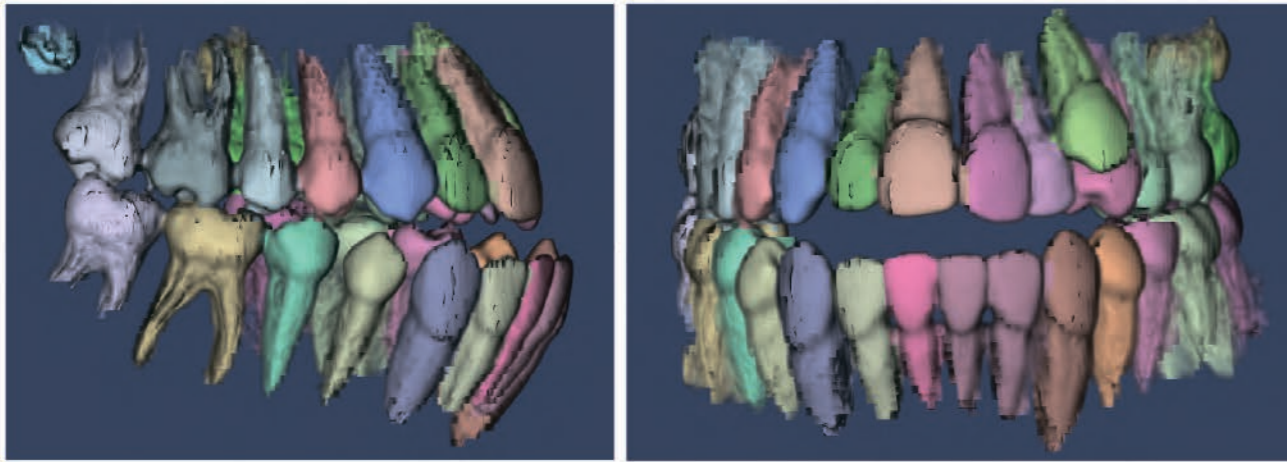
- 1 Automatic data analysis for programming the articulator
- 2 Construction of the occlusal plane, the Monson sphere
Export these planes as a 3D object to modeling programs
- 3 Digital variator-planning a new location of the lower jaw
- 4 Cephalometric calculations based on CBCT data for planning prosthetics treatment
- 5 Forming a protocol for the laboratory
- 6 Dynamic cephalometric analysis
- 7 Automatic cephalometric prosthetics analysis
- 8 Simplified and automatic complex data analysis
- 9 Automatic analysis of the location of joints. / in development /
- 10 Analysis of MRI data





Orthodontics

(module)



- 1 / Automatic segmentation of the roots of teeth according to CBCT data
- 2 / Automatic segmentation of the crown part of the teeth according to dental row scans. | in development |
- 3 / Automatic planning of orthodontic treatment using aligners. | in development |
- 4 / Automatic unification and formation of a whole tooth. | in development |
- 5 / Automatic alignment of the dentition. | in development |
- 6 / Calculations of virtual models, analysis of deformations. | in development |

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