DIGITAL SMILE DESIGN BY COACHMAN

- DAILY WORK WITH THE DSD CONCEPT -

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The **Digital Smile Design** (DSD) from Christian Coachman is an important part of our daily work. It is an integral way of viewing the patient which clearly improves the quality of the treatment planning, the functional and the esthetic result. The important part of the DSD concept is that the patient directly can see his smile after treatment in an emotional presentation. We could convince easily the patients and motivate them by a perfect immediate facial integration of the mockup.

The DSD concept was described in great detail by Coachman.

Next to general examination, it is essential to choose the initial picture, because the DSD-process will start from this point.
Based on our own experience, we want to suggest a new procedure to take the frontal pictures.

Head steady position

First of all, we should observe how the patient speaks, smiles and interacts with his head. It is important to note the line joining both eyes. We can often see, that both eyes are not of the horizontal line. These parameters should be taken in consideration for future measurements. We need to check again those parameters in case of CMD treatment.

In order to hold the patient´s head in optimal 3-dimensional position, we use the slit lamp stand (used only by ophthalmologist), because it keeps the patient´s forehead and chin perfectly. We found out, that this procedure is more convenient to keep the patients measurements during work flow.

Fig 1: Facial frontal pictures in the headrest, left retracted, right smile

We use the frontal pictures for the mockup of the treatment plan presentation, after the preparation for measurements for the dental technician, the digital bite fixing as well as for the verification from mockups and all tests included the final result.

In the following we will expose our practical work with the DSD concept on different cases without showing the smile design process in details. We can confirm that the digital work flow is very helpful in all steps and cases for esthetic treatments, because it saves time and gives better results in horizontal / vertical plans without extensive corrections.

Case 1: 13-23 e-max- crowns

Fig 2: Facial frontal pictures in the headrest retracted
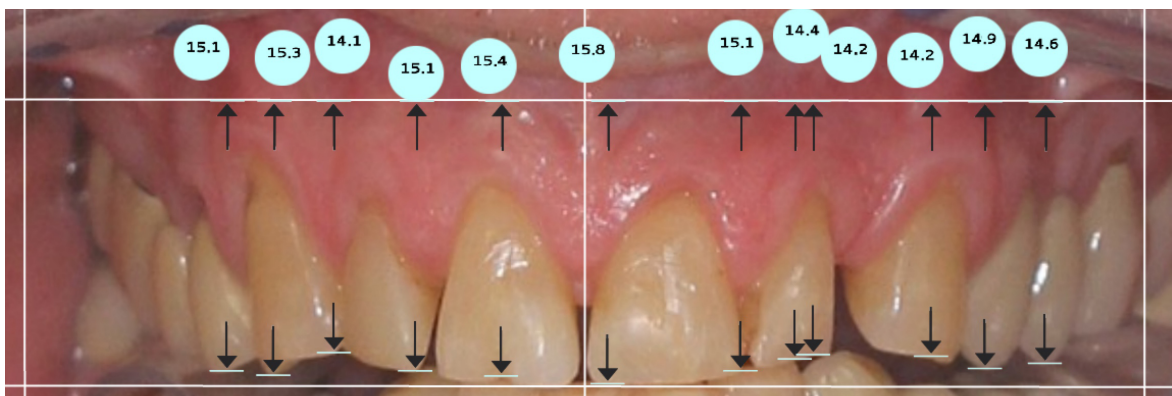

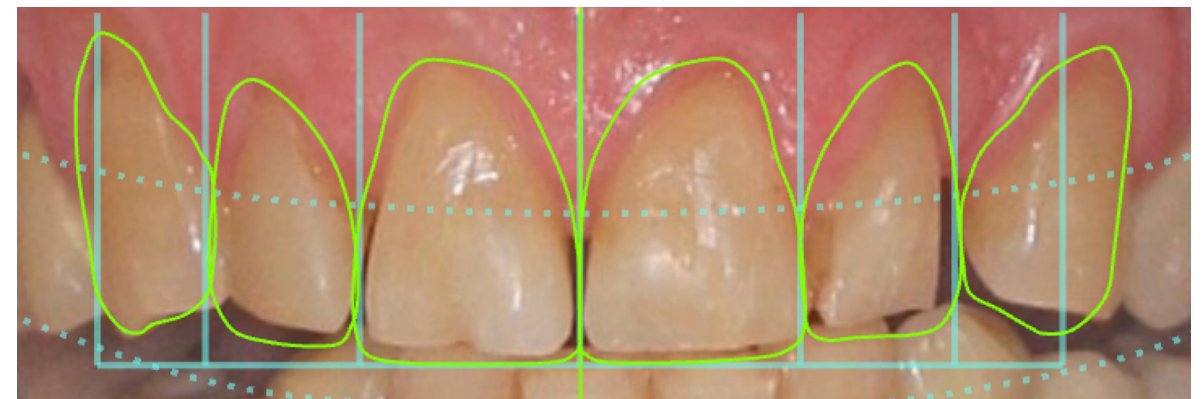Fig 3: Measurements for the technician

Fig 4: Digital Smile Design

Fig 5: Direkt mockup, created with silicon key. without correction

Fig 6: Comparison before and after, intraoral

Fig 7: Comparison before and after, extraoral

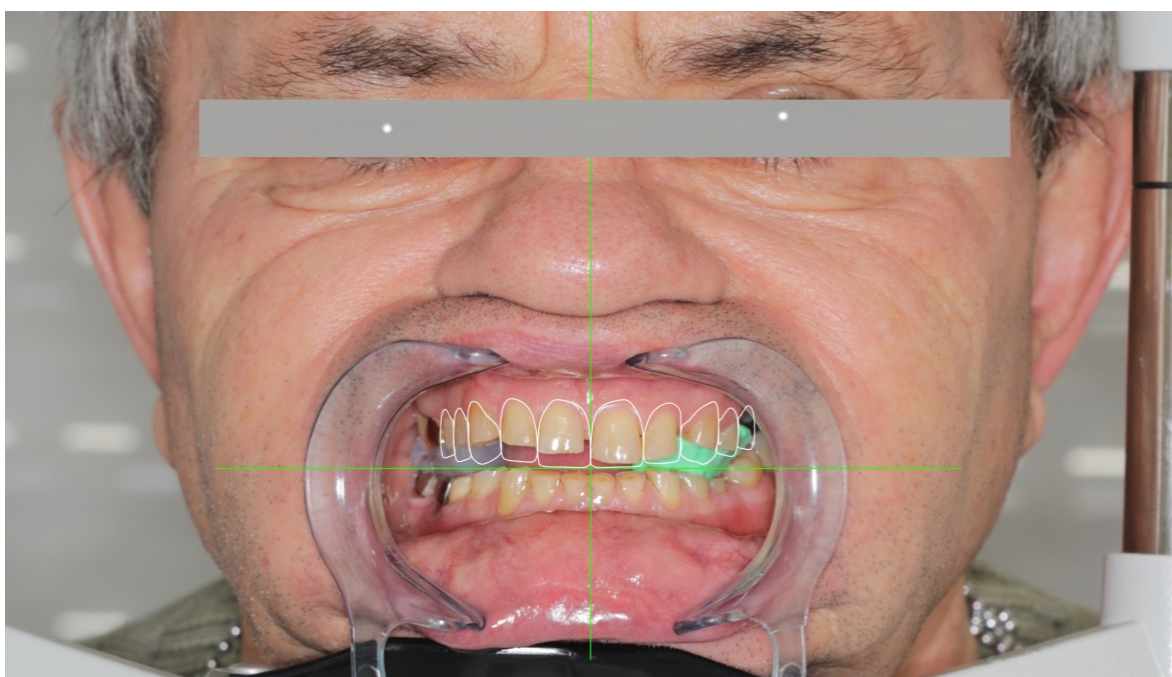**Case 2: Mockup for the treatment- plan-presentation by a patient with CMD**

Fig 9: Initial picture

Fig 10: Direkt mockup in the upper- and lower jaw, with bite increase, without correction

Case 3, Zirkon/ e-max- crowns in the upper jaw

Fig 8: Facial frontal pictures in the headrest retracted with 8 mm bite increase, DSD
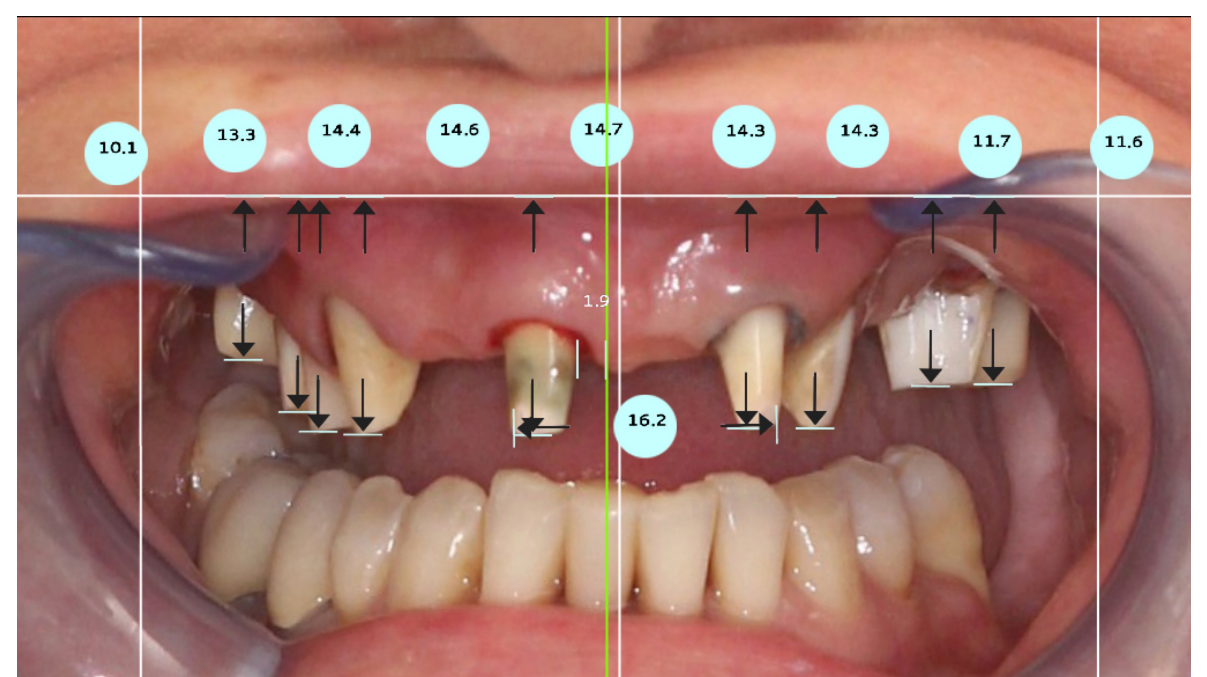

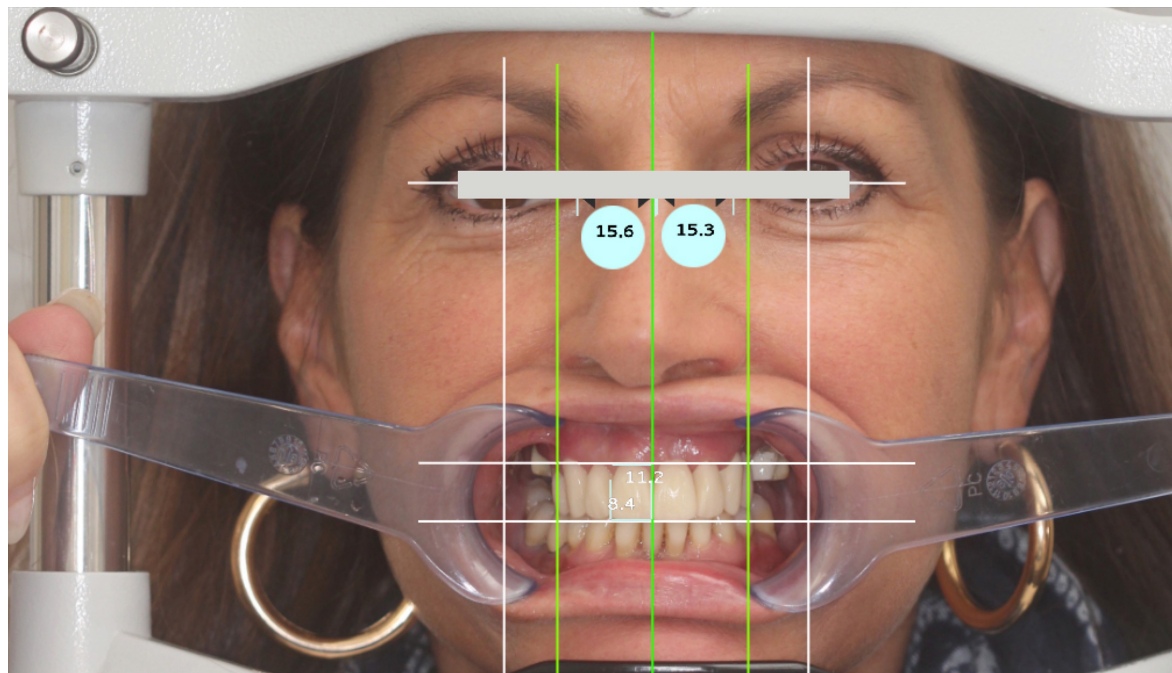Fig 11: Measurements for the technician, after preparation

Fig 12: Digital control from the indirekt mockup after preparation

Fig 13: Initial picture

Fig 14: Result of treatment in the upper jaw with crowns and bridges, in the lower jaw after bleaching and direct composite fillings

Case 4: Mockup by a patient with chronical parodontitis

Fig 15: Initial picture in the headrest, retracted

Fig 16: Initial picture

Fig 17: Direkt mockup in the upper jaw, without correction

Fig 18: Initial smile

Fig 19: Mockup smile

Abstract

Last but not list, we present a new method for taking frontal pictures used for the concept of digital smile design from C. Coachman. These little feature can help taking more standardized pictures in different steps of the DSD process and also can enhance the treatment´s quality. The DSD concept is convenient for the patient and all the members of the treatment team.

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