

Filed on behalf of Patent Owner 3Shape A/S

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EXOCAD GMBH and EXOCAD AMERICA, INC.
Petitioners

v.

3SHAPE A/S
Patent Owner

Case No. IPR2018-00788
Patent 9,336,336

**PATENT OWNER'S PRELIMINARY RESPONSE TO THE PETITION
FOR *INTER PARTES* REVIEW FOR U.S. PATENT NO. 9,336,336
PURSUANT TO 35 U.S.C. § 313 AND 37 C.F.R. § 42.107**

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B. “arrange the at least one 2D image relative to the 3D virtual model in a virtual 3D space such that the at least one 2D image and the 3D virtual model are aligned when viewed from a viewpoint and remain separate representations after being arranged”	14
C. “render a part of the at least one 2D image that includes teeth at least partly or wholly transparent”	15
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a. Petitioner fails to demonstrate that, in the figures of Wiedmann, a 3D virtual model and a 2D image are both visualized in the 3D space.	22
b. Wiedmann discloses determining measurements in a 2D space, not the ability to “move one or more objects in three dimensions” as required under Petitioner’s own construction.	23

2.	Petitioner impermissibly relies on the same “optimum tooth shape” disclosure of Wiedmann to allegedly satisfy two distinct elements recited in the claims.	25
a.	The claimed “3D virtual model” is a distinct element from the claimed “restoration.”	25
b.	It is impermissible for Petitioner to rely on the same “optimum tooth shape” disclosed by Wiedmann to somehow satisfy both the claimed “3D virtual model” and “restoration” elements which are distinct from each other.	28
c.	Petitioner fails to demonstrate that Wiedmann discloses a 3D virtual model “of at least part of an oral cavity of the patient” when properly construed.	29
3.	Petitioner fails to demonstrate that Wiedmann discloses the claimed feature “remain separate representations after being arranged.”	30
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b.	Petitioner’s conclusory assertions are unsupported by any credible evidence and should be given no weight.	34

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2. Petitioner provides no reason with rational underpinnings for why a POSITA would have replaced the optimum tooth shape of Wiedmann with a 3D virtual model which is of at least part of an original oral cavity of the patient that is provided prior to designing the recited restoration.37

3. Like Wiedmann, Sachdeva fails to disclose or suggest the claimed feature “remain separate representations after being arranged.”38

C. Wiedmann Should Be Given No Weight Because Petitioner Provides No Explanation as to Why Wiedmann Was Somehow Publicly Accessible as of the April 2008 Date Alleged by Petitioner.39

D. Wiedmann Should Be Given No Weight Because Petitioner Fails to Provide the Required Affidavit Attesting to the Accuracy of the Alleged Translation.41

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1. Sachdeva does not disclose that “the at least one 2D image and the 3D virtual model are aligned ... and remain separate representations after being arranged.”44

a. The morphable face model of Sachdeva, and in particular “morphable face model 102” in FIG. 6 of Sachdeva, is a 3D model, not a 2D model as alleged by Petitioner.44

b. FIG. 6 of Sachdeva depicts the 3D face model 102 and the 3D tooth model 104 in a non-aligned state.46

c. Once the 3D face model 102 and the 3D tooth model 104 are aligned, Sachdeva teaches that they are constructed into a single composite model, and thus do not remain as separate representations.48

d. The ’937 Patent fails to cure the above-described deficiencies of Sachdeva.52

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2.	Petitioner provides no explanation of how Sachdeva discloses “either virtually cut[ting] at least a part of teeth out of the at least one 2D image or render[ing] a part of the at least one 2D image that includes teeth at least partly or wholly transparent,” as required by the claims.	54
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APPENDIX A - LIST OF EXHIBITS

CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

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