

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CLEARCORRECT OPERATING, LLC,
Petitioner,

v.

ALIGN TECHNOLOGY, INC.,
Patent Owner

Case No. IPR2025-00817
U.S. Patent No. 10,791,936

**PETITIONER'S OPPOSITION TO PATENT OWNER'S
PRELIMINARY RESPONSE**

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I. Introduction

Patent Owner's Preliminary Response ("POPR," Paper 10) misunderstands the teachings of Boerjes and Petitioner's reliance on those teachings. Boerjes directly addresses the key limitation found missing during prosecution, namely the limitation to replace a portion of the model with second scan data of a physically changed portion of the patient's mouth. Patent Owner attempts to narrow Boerjes's disclosure and thereby dismiss it. But these attempts are unsupported by evidence and contradicted by the record. Notably, Patent Owner offers only attorney argument, without any expert declaration, to rebut Boerjes's teachings, despite the technical nature of the dispute. Patent Owner's selective quotations and strained interpretations cannot overcome Boerjes's express disclosure. The Office has already noted that the Petition "persuasively demonstrates that the Office erred" during prosecution of the '936 patent. Paper No. 13 at 3-4. Trial should be instituted.

II. Boerjes Discloses the Key Limitation: Replacing a Portion of a Model With Scan Data of a Physically Changed Portion

During prosecution, the '936 patent claims were allowed based on one claim limitation—that "the intra-oral cavity (e.g. dentition) is modified in between the scans." Ex-1002, 238-39; Pet. 6; Ex-1003, ¶ 56. Boerjes (Ex-1004), a never-before-seen prior art reference, discloses precisely this "missing" limitation (1[h]).

Patent Owner contends that Boerjes does not satisfy this limitation to "replace at least a portion of the removed surface portion of the model using the received

second scan data of the patient's teeth including surface data of a physically changed portion of the patient's intraoral cavity." Ex-1001, claim 1. Patent Owner argues that Boerjes teaches only full rescanning rather than creating a composite image. POPR at 9-13. That is incorrect.

Boerjes discloses creating a composite image after physical modification. Boerjes states that, "[i]f the data is not satisfactory, . . . the digital model may be *supplemented* or replaced with new scan data. This may include, for example, new scanning to replace apparently erroneous or inadequate scan data, or a new scan *of the dental subject matter* following, e.g., additional surface preparation consistent with errors identified during quality control." Ex-1004, [00199] (emphasis added). This paragraph explicitly discloses that the digital model may be supplemented with new scan data. It provides two distinct exemplary scenarios: (1) replacing erroneous data in the original scan, and (2) supplementing an outdated scan with new scan data of particular subject matter after surface preparations, *i.e.*, physical modification of the dentition. Patent Owner mischaracterizes these examples—first ignoring that they are only examples of Boerjes's broader teaching, and then wrongly suggesting that these examples refer only to a complete rescan of an intraoral cavity.

Boerjes is not so limited. Boerjes expressly discloses identifying a region of a scan and then *supplementing* the pre-existing scan data by taking a new scan of that region. Ex-1004, [00199]. Its quality control process allows not only for rescanning

to replace parts of the scan that include erroneous or inadequate data, but it also teaches rescanning particular subject matter following “additional surface preparation,” *i.e.*, physical modifications. *Id.* Indeed, Boerjes’s quality control steps include “identification of *regions of a prepared tooth surface* requiring additional preparation or reduction, or *regions of a digital model* requiring additional or supplemental scanning.” *Id.*, [00196] (emphasis added); *see also* Pet. 43-47. This further confirms that Boerjes identifies specific regions for rescanning, including those portions that require physical modifications.

Contrary to Patent Owner’s suggestion, POPR at 12-14, Boerjes explains that these physical modifications of the dentition can occur between the scans. *See, e.g.*, Ex-1004, Fig. 4, [00199] (explaining that “the digital model may be supplemented or replaced with new scan data,” which “may include, for example, . . . new scan of the dental subject matter following, *e.g.*, additional surface preparation”). Boerjes further illustrates this process in Figure 4. In step 414, it provides that “the digital model may be supplemented or replaced with new scan data.” Ex-1004, [00199], Fig. 4. Step 404 then obtains a new digital model. Contrary to Patent Owner’s assertion, Boerjes does not require a *full* rescan of the *entire* intraoral cavity. It permits targeted rescanning and model updating.

Patent Owner’s made-up distinction of Boerjes’s rescanning to address “erroneous or inadequate scan data” and rescanning after “*additional surface*

preparation” contradicts Boerjes’s consistent teaching that the rescanning (“new scan data” or “new scanning”) is “*consistent with errors identified*,” which are “*regions*” of the digital model. Ex-1004, [00199] (emphasis added); *see also id.*, [00196]. Nowhere does Boerjes suggest that a full rescan of the entire oral cavity is necessary after a physical modification such as surface preparation. POPR at 13.

Thus, Patent Owner’s attempt to narrow Boerjes to only doing an entire rescan when the intraoral cavity is modified fails to consider all of Boerjes’s express teachings and the understanding of one of ordinary skill. Indeed, there can be no dispute that Boerjes teaches modifying part of the intraoral cavity (e.g., “additional surface preparation”) between the scans (Ex-1004, [00196], [00199]; Pet. 19-20, 40-46; Ex-1003, ¶¶ 107-110), which the Office said was missing from the prior art when allowing the claims. Ex-1002, 238-39. Given that this was the only basis for allowing the claims, Boerjes illustrates that the Office materially erred in allowing the claims.

III. Patent Owner Relies on Attorney Arguments to Narrow Boerjes and Mischaracterize the Petition

Patent Owner offers no expert testimony to rebut this understanding. Instead, it relies on attorney argument to repeatedly assert that Boerjes teaches only full rescanning. POPR, 12-14. But nothing in Boerjes equates “the dental subject matter” with the patient’s entire intraoral cavity. *Supra* at 3-5. Indeed, in context, Boerjes refers to a new scan of a portion of the intraoral cavity that has been modified by additional surface preparation. Ex-1004, [00199] (“a new scan of the dental subject

matter following, e.g., *additional surface preparation* consistent with errors identified during *quality control*.” (emphasis added)). This is consistent with Figure 4 which discloses “supplement[ing]” the scan—not throwing it out and rescanning the patient’s entire intraoral cavity. *Id.*

Contrary to Patent Owner’s accusations, this support is not “clip-quote[d]” from Boerjes. POPR at 10, 12-17. Petitioner quotes Boerjes accurately and in context, providing detailed analysis and expert support. Ex-1003, ¶¶ 108-117.

Patent Owner, by contrast, offers no declaration, no technical analysis, and no evidence to support its strained reading of Boerjes. It attempts to criticize Petitioner’s annotated figures as “hindsight colored reimagination.” POPR at 5, 16. But such annotated figures are standard demonstrative tools used to explain prior art, and Petitioner’s annotations simply and accurately reflect Boerjes’s teachings, and are supported by expert testimony. Ex-1003, ¶¶ 84, 107, 110. For example, annotating step 414 as receiving second scan data after physical modification and step 404 as generating a new model incorporating that data is entirely consistent with Boerjes’s disclosure. *See Supra* Section II. Patent Owner’s attorneys cannot rebut Boerjes’s underlying disclosure.

IV. CONCLUSION

For these reasons and those in the Petitions, Petitioner requests that the Board institute review.

Respectfully submitted,

Dated: September 17, 2025

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Petitioner's Opposition to Patent Owner's Preliminary Response** was served on September 17, 2025, via email directed to counsel of record for the Patent Owner at the following:

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