

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

ALIGN TECHNOLOGY, INC.,

Plaintiff,

v.

CLEARCORRECT OPERATING, LLC,  
CLEARCORRECT HOLDINGS, INC., &  
INSTITUT STRAUMANN AG,

Defendants.

Case No. 6:24-cv-00187-ADA-DTG

PATENT CASE

**JURY TRIAL DEMANDED**

CLEARCORRECT OPERATING, LLC,  
CLEARCORRECT HOLDINGS, INC., &  
STRAUMANN USA, LLC,

Counterclaim-Plaintiffs,

v.

ALIGN TECHNOLOGY, INC.,

Counterclaim-Defendant.

**CLAIM CONSTRUCTION ORDER**

Before the Court are the Parties' claim construction briefs: Defendants ClearCorrect Holdings, Inc., ClearCorrect Operating, LLC, and Institut Straumann AG and Straumann USA, LLC (collectively, "ClearCorrect")'s Opening Claim Construction Brief (ECF No. 121), Plaintiff Align Technology, Inc. ("Align")'s Responsive Claim Construction Brief (ECF No. 136), Defendants' Reply Claim Construction Brief (ECF No. 138), Plaintiff's Sur-Reply Claim Construction Brief (ECF No. 140), and the parties' Joint Claim Construction Statement (ECF No. 142). On January 21, 2025, the Court provided the parties with its Preliminary Claim

Constructions, and on January 22, 2025, the Court held a *Markman* hearing. The Court issues this Order to memorialize the Court's final claim construction rulings for the parties, and to inform the parties that the Court will issue a more-detailed order explaining its analysis in due course. The deadline to file any objections to the undersigned's claim construction rulings under Federal Rules of Civil Procedure 59 and 72 does not begin to run until the more-detailed order is entered on the docket.

**IT IS SO ORDERED.**

**SIGNED** this 5<sup>th</sup> day of June, 2025.

  
DEREK T. GILLILAND  
UNITED STATES MAGISTRATE JUDGE

| # | Claim Term                                                                                                                                   | Align's Proposed Construction                                                                                 | ClearCorrect's Proposed Construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Court's Final Constructions                                                                                          |
|---|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1 | <p>“through at least one of staggering and roundtripping of at least one dental object”</p> <p>'444 patent, cl. 1 (and dependent claims)</p> | by staggering or roundtripping at least one dental object                                                     | through assessment of both staggering and roundtripping with respect to avoiding collisions with or obstructions between at least one dental object                                                                                                                                                                                                                                                                                                                                                                                                                                  | Plain and ordinary meaning which includes “ <u>by</u> staggering <u>or</u> roundtripping at least one dental object” |
| 2 | <p>“an optimal number of stages for the order of movement of the dental objects”</p> <p>'444 patent, cls. 5, 19, 33</p>                      | the largest number of the minimum stages needed to place the patient's teeth in their final, desired position | Indefinite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The largest number of the minimum stages needed to place the patient's teeth in their final, desired position        |
| 3 | <p>“V-shaped pattern”</p> <p>'444 patent, cls. 8, 22, 36</p> <p>'456 patent, cl. 3</p>                                                       | No construction necessary (plain and ordinary meaning)                                                        | A pattern where teeth having the same and/or similar positions on the arch will be moved beginning at the same stage, and will move continuously until they reach their final position, and where the most posterior-positioned teeth move first (e.g., the molars, or teeth in position 7 and/or 8) then the next anterior-positioned teeth move sequentially until all of the teeth reach their final position, with the next anterior-positioned teeth not scheduled to begin moving until at least approximately the half-way stage of its respective posterior-positioned tooth | Plain and Ordinary Meaning                                                                                           |
| 4 | <p>“A-shaped pattern”</p>                                                                                                                    | No construction necessary (plain                                                                              | A pattern where teeth having the same and/or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Plain and Ordinary Meaning                                                                                           |

| # | Claim Term                                                                             | Align's Proposed Construction                          | ClearCorrect's Proposed Construction                                                                                                                                                                                                                                                                                                                                                                                                                   | Court's Final Constructions |
|---|----------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|   | '444 patent, cls. 9, 23, 37<br><br>'456 patent, cl. 3                                  | and ordinary meaning)                                  | similar positions on the arch will be moved beginning at the same stage, and will move continuously until they reach their final position, with the most anterior-positioned teeth (e.g., the incisors, or teeth in positions 1 and/or 2) moving first and then the next posterior-positioned teeth sequentially moving until all of the teeth reach their final position                                                                              |                             |
| 5 | "M-shaped pattern"<br><br>'444 patent, cls. 10, 24, 38<br><br>'456 patent, cl. 3       | No construction necessary (plain and ordinary meaning) | A pattern where teeth having the same and/or similar positions on the arch will be moved beginning at the same stage, and will move continuously until they reach their final position, with teeth between the anterior teeth and the posterior teeth (e.g., the bicuspid, or teeth in positions 4 and/or 5) and both the adjacent anterior and/or adjacent posterior teeth then sequentially moving until all of the teeth reach their final position | Plain and Ordinary Meaning  |
| 6 | "mid-line shift pattern"<br><br>'444 patent, cls. 11, 25, 39<br><br>'456 patent, cl. 3 | No construction necessary (plain and ordinary meaning) | A pattern where tooth movement begins on one side of the patient's arch to center the teeth with respect to the mid-line of the patient's mouth, with the next tooth/teeth to move not scheduled to begin moving until at least approximately the half way stage of its                                                                                                                                                                                | Plain and Ordinary Meaning  |

| # | Claim Term                                                                                                                                                                                                                                                                                | Align's Proposed Construction                                                                                                                          | ClearCorrect's Proposed Construction                                                                                                                                                                                                                                                                                                                                       | Court's Final Constructions                                                                         |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|   |                                                                                                                                                                                                                                                                                           |                                                                                                                                                        | respective previously scheduled tooth/teeth                                                                                                                                                                                                                                                                                                                                |                                                                                                     |
| 7 | <p>“means for receiving an electronic representation of each dental object of the plurality of dental objects in relation to one another”</p> <p>'444 patent, cl. 15 (and dependent claims)</p>                                                                                           | <p>a computing device and equivalents</p> <p><i>E.g.</i>, '444 patent, 5:12-16</p>                                                                     | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: receiving an electronic representation of each dental object of the plurality of dental objects in relation to one another</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p>                                                                                            | <p>Not indefinite</p> <p>Structure at '444 patent, 5:12-16 (a computing device and equivalents)</p> |
| 8 | <p>“means for determining an order of movement for each respective dental object such that the dental objects avoid colliding with each other on their respective routes from said initial position to said desired final position”</p> <p>'444 patent, cl. 15 (and dependent claims)</p> | <p>a computer program that performs the steps identified in Figure 2B and equivalents</p> <p><i>E.g.</i>, '444 patent, 5:19-22, 5:29-6:46, Fig. 2B</p> | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: determining an order of movement for each respective dental object such that the dental objects avoid colliding with each other on their respective routes from said initial position to said desired final position.</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p> | Indefinite                                                                                          |
| 9 | <p>“means for determining a route each</p>                                                                                                                                                                                                                                                | <p>a computer program that is configured to</p>                                                                                                        | <p>Subject to § 112 ¶ 6</p>                                                                                                                                                                                                                                                                                                                                                | Indefinite                                                                                          |

| #  | Claim Term                                                                                                                           | Align's Proposed Construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ClearCorrect's Proposed Construction                                                                                                                                                                                          | Court's Final Constructions |
|----|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|    | <p>respective dental object will move to achieve its respective final position”</p> <p>'444 patent, cl 16 (and dependent claims)</p> | <p>segment an initial digital dataset into digital models of individual dental objects and gingival tissue, calculate a transformation for each dental object, and then calculate one or more intermediate positions for each dental object, taking into account any constraints imposed on the movement of dental objects and any collisions that might occur between dental objects as the dental objects move from one treatment stage to the next and equivalents</p> <p><i>E.g., '444 patent, 3:19-24, 3:36-61</i></p> | <ul style="list-style-type: none"> <li>• <u>Function</u>: determining a route each respective dental object will move to achieve its respective final position</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p> |                             |
| 10 | <p>“means for determining (a), (b), and (c) in relation to each of the other dental objects”</p>                                     | <p>a computer program that is configured to segment an initial digital dataset into digital models of individual dental</p>                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: determining (a), (b), and (c) in relation to each of the other dental objects</li> </ul>                                                | Indefinite                  |

| #  | Claim Term                                                                                                                                                           | Align's Proposed Construction                                                                                                                                                                                                                                                                                                                                                                                                                   | ClearCorrect's Proposed Construction                                                                                                                                                                                                                | Court's Final Constructions |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|    | '444 patent, cls. 17 (and dependent claim)                                                                                                                           | <p>objects and gingival tissue, calculate a transformation for each dental object, and then calculate one or more intermediate positions for each dental object, taking into account any constraints imposed on the movement of dental objects and any collisions that might occur between dental objects as the dental objects move from one treatment stage to the next and equivalents</p> <p><i>E.g.</i>, '444 patent, 3:19-24, 3:36-61</p> | <ul style="list-style-type: none"> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p>                                                                                                                                                        |                             |
| 11 | <p>“means for determining a rate at which each respective dental object will move along its respective route”</p> <p>'444 patent, cls. 16 (and dependent claims)</p> | <p>a computer program that determines a rate at which each respective dental object will move along its respective route</p> <p><i>E.g.</i>, '444 patent, 4:58-5:10</p>                                                                                                                                                                                                                                                                         | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: determining a rate at which each respective dental object will move along its respective route</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p> | Indefinite                  |

| #  | Claim Term                                                                                                                                                                            | Align's Proposed Construction                                                                                                                                                                                                                                                                                                                                                                 | ClearCorrect's Proposed Construction                                                                                                                                                                                                                                                         | Court's Final Constructions                                                                                                                                                                                                                                                                                                                                                                                   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 | <p>“means for determining a total distance each respective dental object will move”</p> <p>'444 patent, cl. 20</p>                                                                    | <p>a computer program for determining a total distance each respective dental object will move and equivalents</p> <p><i>E.g.</i>, '444 patent, 4:58-5:10</p>                                                                                                                                                                                                                                 | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: determining a total distance each respective dental object will move</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p>                                                                    | Indefinite                                                                                                                                                                                                                                                                                                                                                                                                    |
| 13 | <p>“means for adjusting at least one of the route and the rate of at least one dental object to avoid collision with at least one other dental object”</p> <p>'444 patent, cl. 18</p> | <p>a computer program that performs collision avoidance via round-tripping, staggering, or slowing, wherein the computer program first attempts staggering of the teeth movement, followed by slowing-down/interim key frames if the staggering does not avoid collisions, and then followed by round-tripping as a last resort and equivalents</p> <p><i>E.g.</i>, '444 patent, 12:41-65</p> | <p>Subject to § 112 ¶ 6</p> <ul style="list-style-type: none"> <li>• <u>Function</u>: adjusting at least one of the route and the rate of at least one dental object to avoid collision with at least one other dental object</li> <li>• <u>Structure</u>: None</li> </ul> <p>Indefinite</p> | <p>Not indefinite. Structure at '444 patent, 12:41-65</p> <p>a computer program that performs collision avoidance via round-tripping, staggering, or slowing, wherein the computer program first attempts staggering of the teeth movement, followed by slowing-down/interim key frames if the staggering does not avoid collisions, and then followed by round-tripping as a last resort and equivalents</p> |
| 14 | <p>“means for determining an optimal number</p>                                                                                                                                       | <p>a computer program that determines an</p>                                                                                                                                                                                                                                                                                                                                                  | <p>Subject to § 112 ¶ 6</p>                                                                                                                                                                                                                                                                  | Not indefinite.                                                                                                                                                                                                                                                                                                                                                                                               |

| #  | Claim Term                                                                                                 | Align's Proposed Construction                                                                                                                                                                                           | ClearCorrect's Proposed Construction                                                                                                                                                                  | Court's Final Constructions                                                                                                                                                                                                                                  |
|----|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | of stages for the order of movement of the dental objects"<br><br>'444 patent, cl 19 (and dependent claim) | optimal number of stages by selecting the largest number of the minimum number of stages needed to place the dental objects in their final, desired positions and equivalents<br><br><i>E.g.</i> , '444 patent, 15:6-20 | <ul style="list-style-type: none"> <li><u>Function</u>: determining an optimal number of stages for the order of movement of the dental objects</li> <li><u>Structure</u>: None</li> </ul> Indefinite | Structure at '444 patent, 15:6-20<br><br>a computer program that determines an optimal number of stages by selecting the largest number of the minimum number of stages needed to place the dental objects in their final, desired positions and equivalents |
| 15 | "means for ordering the movement of the dental objects in a V-shaped pattern"<br><br>'444 patent, cl. 22   | a computer program configured to utilize the pattern depicted in Figure 5 and equivalents<br><br><i>E.g.</i> , '444 patent, 9:12-15, 9:42-44, Fig. 5                                                                    | Subject to § 112 ¶ 6 <ul style="list-style-type: none"> <li><u>Function</u>: ordering the movement of the dental objects in a V-shaped pattern</li> <li><u>Structure</u>: None</li> </ul> Indefinite  | Not Indefinite.<br><br>Structure at '444 patent, 9:12-15, 9:42-44, Fig. 5:<br><br>a computer program configured to utilize the pattern depicted in Figure 5 and equivalents                                                                                  |
| 16 | "means for round tripping at least one dental object"<br><br>'444 patent, cl. 27                           | a computer program configured to move a first tooth out of the path of a second tooth, and once the second tooth has moved sufficiently, move the first                                                                 | Subject to § 112 ¶ 6 <ul style="list-style-type: none"> <li><u>Function</u>: round tripping at least one dental object</li> <li><u>Structure</u>: None</li> </ul> Indefinite                          | Not indefinite.<br><br>Structure at '444 patent, 12:51-55:<br><br>a computer program configured to move a first tooth out of the path of a second tooth, and                                                                                                 |

| #  | Claim Term                                                                                                                                                                                                                                                                           | Align's Proposed Construction                                                                                                                                  | ClearCorrect's Proposed Construction                                                                                                                        | Court's Final Constructions                                                                                                                                                       |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                                                                                                                                                                                      | tooth back to its previous position before proceeding to a desired final position of the first tooth and equivalents<br><br><i>E.g., '444 patent, 12:51-55</i> |                                                                                                                                                             | once the second tooth has moved sufficiently, move the first tooth back to its previous position before proceeding to a desired final position of the first tooth and equivalents |
| 17 | “replace [replacing] at least a portion of the [removed] surface portion of the model [...] using the received second scan data [at least a portion of the second scan data]”<br><br>'936 patent, cls. 1 (and dependent claims), 9 (and dependent claims), 17 (and dependent claims) | No construction necessary (plain and ordinary meaning)                                                                                                         | [register] / [registering] the [received] second scan data with a retained portion of the model after removing the scan data of the removed surface portion | [register] / [registering] the [received] second scan data with a retained portion of the model after removing the scan data of the removed surface portion                       |
| 18 | “second scan data of the patient's teeth”<br><br>'936 patent, cl. 17 (and dependent claims)                                                                                                                                                                                          | No construction necessary (plain and ordinary meaning)                                                                                                         | new scan data of the patient's teeth after the patient's intraoral cavity itself has physically changed                                                     | Plain and Ordinary Meaning                                                                                                                                                        |