

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KAVO DENTAL TECHNOLOGIES, LLC,  
Petitioner,

v.

OSSEO IMAGING, LLC,  
Patent Owner.

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IPR2020-00671  
Patent 6,381,301 B1

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Before GEORGIANA W. BRADEN, NABEEL U. KHAN, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
35 U.S.C. § 314

INTRODUCTION

*A. Background and Summary*

Kavo Dental Technologies, LLC (Petitioner) filed a Petition to institute an *inter partes* review of claims 1–8 and 10–20 of U.S. Patent No. 6,381,301 B1 (Ex. 1002, “the ’301 patent”). Paper 2 (“Petition,” “Pet.”). Ossego Imaging, LLC (Patent Owner) filed a Patent Owner Preliminary

Response. Paper 6 (“Preliminary Response,” “Prelim. Resp.”). Pursuant to our authorization (Paper 7), Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 8, “Petitioner Preliminary Reply,” “Pet. Prelim. Reply”) and Patent Owner filed a Sur-Reply (Paper 9, “Patent Owner Preliminary Sur-reply,” “PO Prelim. Sur-reply”).

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). *Inter partes* review may not be instituted unless “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). A decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the Petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

For the reasons set forth below, upon considering the Petition and the evidence of record, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail with respect to at least one of the challenged claims. Accordingly, we institute *inter partes* review on all of the challenged claims based on all of the grounds identified in the Petition.

*B. Real Parties in Interest*

Petitioner identifies “Kavo Dental Technologies, LLC and its corporate relatives: Kerr Corporation; Sybron Dental Specialties, Inc.; DCII US Holdings, LLC; DCII North America, LLC; Ormco Corporation; Dental Imaging Technologies Corporation; and Envista Holdings Corporation” as real parties in interest. Pet. 2.

Patent Owner identifies Osseo Imaging, LLC as the real party in interest. Paper 3, 2 (Patent Owner's Mandatory Notices).

*C. Related Matters*

Petitioner and Patent Owner identify the following related proceeding: *Osseo Imaging, LLC v. Kavo Dental Technologies, LLC*, Case No. 3:19-cv-00174-MOC-DSC (W.D.N.C.), filed April 5, 2019 (“Kavo proceeding”). Pet. 2–3; Paper 5, 2. Additionally, Petitioner also identifies the following proceeding in which the '301 patent is asserted: *Osseo Imaging, LLC v. Planmeca USA Inc.*, 1:17-cv- 01386 (D. Del.) (“Planmeca proceeding”). Pet. 3.

*D. The '301 Patent*

The '301 patent is titled “Dental and Orthopedic Densitometry Modeling System and Method.” Ex. 1002, code (54).

According to the '301 patent, “[t]omography or sectional radiography techniques using scanning X-ray beams have previously been employed for dental applications.” Ex. 1002, 1:61–62. The '301 patent states that “[i]n the medical field, densitometry procedures are used for measuring bone morphology density (BMD) by utilizing scanning X-ray beam techniques.” *Id.* at 2:1–3. The '301 patent further states “[t]he present invention utilizes such densitometry modeling and mapping techniques for dental applications.” *Id.* at 2:18–20.

Figure 1 of the '301 patent is reproduced below.

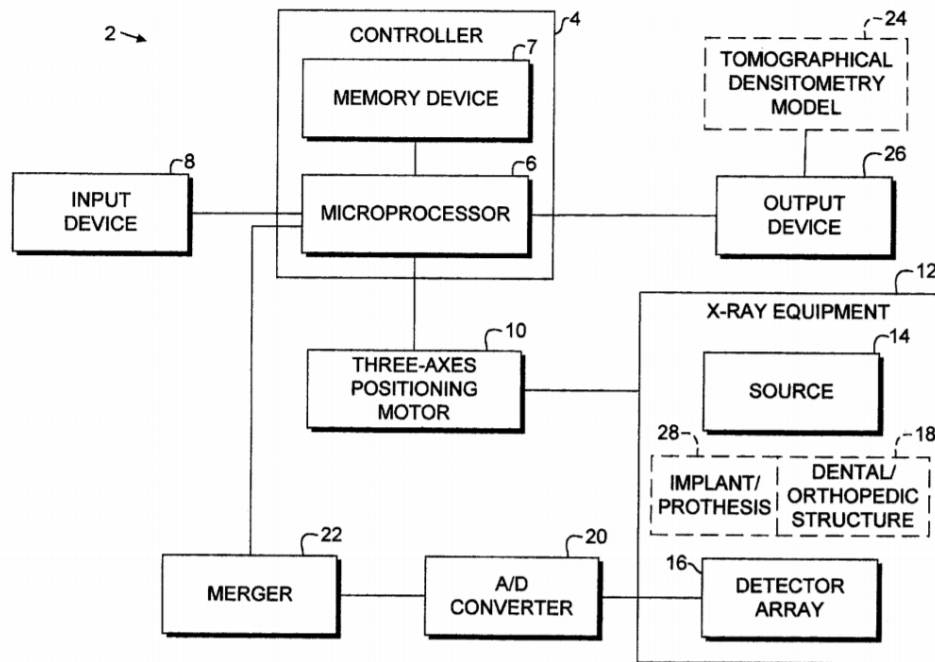


**Fig. 1**

Figure 1 “is a schematic, block diagram of a dental and orthopedic densitometry modeling system embodying the present invention.” Ex. 1002, 3:34–36. Dental and orthopedic densitometry modeling system 2 includes, *inter alia*, controller 4, X-ray equipment 12, analog-to-digital converter 20, and merger device 22. *See generally id.* at 3:55–4:54, Fig. 1. “The microprocessor 6, using data from the merger device 22, creates a tomographical densitometry model 24 which is transmitted to an output device or devices 26.” *Id.* at 4:36–39.

Figure 2 of the '301 patent is reproduced below.

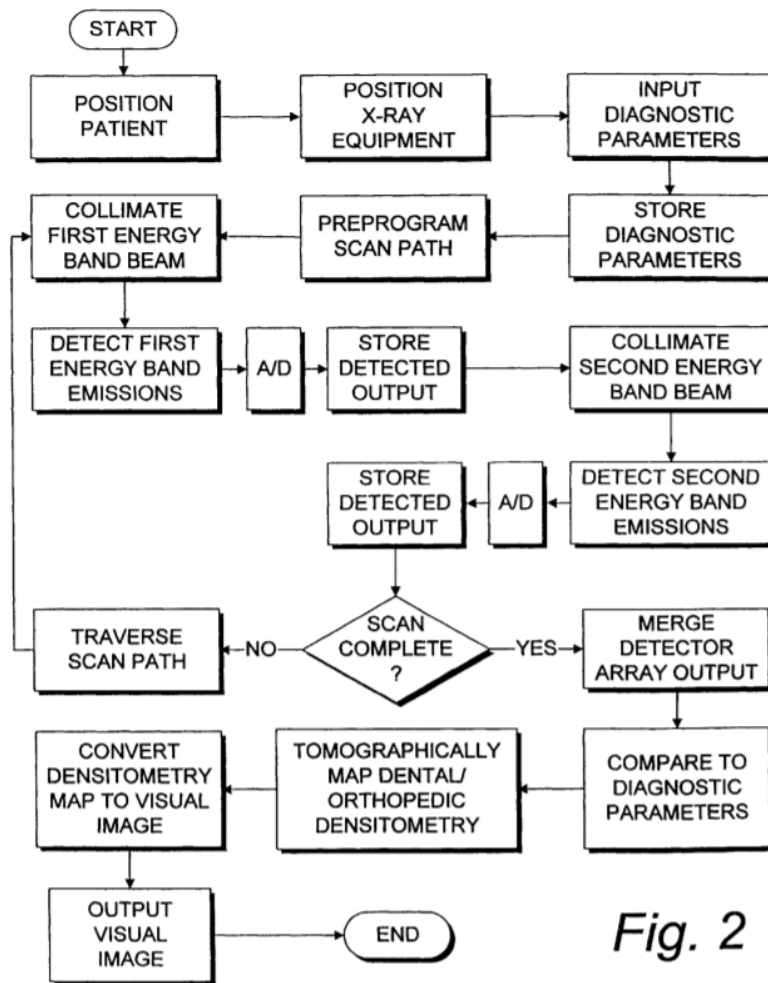


*Fig. 2*

Figure 2 “is a flowchart of a dental and orthopedic densitometry modeling method embodying the present invention.” Ex. 1002, 3:37–38. As described in Figure 2, once the scanning is complete, “[t]he digitized detector array output is merged and compared to the diagnostic parameters which are stored in the computer’s memory. The dental/orthopedic densitometry is tomographically modeled and output, for example to a monitor or printer for converting the model to a visual image.” *Id.* at 5:18–25.

*E. Illustrative Claims*

Claims 1, 10, and 20 are independent claims and claim 1, reproduced below, is illustrative of the subject matter of the challenged claims.

1. A system for tomographically modeling dental and orthopedic structure densitometry, which includes:

a) a controller with a microprocessor and a memory device connected to the microprocessor, said controller including means for storing a pre-existing tomographical dental/orthopedic densitometry model;

b) an input device connected to the microprocessor;

c) a positioning motor connected to the microprocessor and movable in response to from said microprocessor;

d) X-ray equipment including an X-ray source and a detector array;

e) conversion means for converting a signal from said detector array, said conversion means being connected to said detector array and to said microprocessor; and

f) an output device connected to said microprocessor and adapted for receiving a tomographical densitometry model from said microprocessor.

Ex. 1002, 5:28–44.

*F. Prior Art and Asserted Challenges*

Petitioner asserts that claims 1–8 and 10–20 would have been unpatentable based on the following challenges:

| <b>Claim(s) Challenged</b> | <b>35 U.S.C. §<sup>1</sup></b> | <b>Reference(s)/Basis</b> |
|----------------------------|--------------------------------|---------------------------|
| 1–4, 6                     | 102(a), (e)                    | Arai <sup>2</sup>         |

<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. Because the ’301 patent issued from an application filed before March 16, 2013, we apply the pre-AIA versions of the statutory bases for unpatentability.

<sup>2</sup> US 6,118,842, issued Sept. 12, 2000, filed Dec. 9, 1997 (Ex. 1013).

| Claim(s) Challenged | 35 U.S.C. § <sup>1</sup> | Reference(s)/Basis                                  |
|---------------------|--------------------------|-----------------------------------------------------|
| 1–4, 6              | 103(a)                   | Arai, Cann <sup>3</sup>                             |
| 5, 7, 8             | 103(a)                   | Arai, Cann, AAPA <sup>4</sup>                       |
| 10, 12, 18          | 103(a)                   | Arai, Xu, <sup>5</sup> Milestone, <sup>6</sup> Cann |
| 13                  | 103(a)                   | Arai, Xu, Milestone, Cann, Pelc '080 <sup>7</sup>   |
| 14–17               | 103(a)                   | Arai, Xu, Milestone, Cann, Rothman <sup>8</sup>     |
| 11, 19, 20          | 103(a)                   | Arai, Xu, Milestone, Cann, AAPA                     |
| 1–6                 | 102(b)                   | Pelc <sup>9</sup>                                   |
| 1–6                 | 103(a)                   | Pelc, Cann                                          |
| 7, 8                | 103(a)                   | Pelc, Cann, AAPA                                    |
| 10–20               | 103(a)                   | Pelc, Rothman, Xu, Milestone, Cann                  |

<sup>3</sup> Cann, C. E., & Genant, H. K. (1980). Precise Measurement of Vertebral Mineral Content Using Computed Tomography. *Journal of Computer Assisted Tomography*, 4(4), 493–500. doi: 10.1097/00004728-198008000-00018 (Ex. 1014).

<sup>4</sup> Petitioner identifies the following Applicant Admitted Prior Art (AAPA): “The ’301 patent admits that the use of dual-energy X-ray beams for densitometry was known (citing Bisek, U.S. Patent No. RE36,162), and that ‘[a]s discussed therein, dual-energy densitometry can result in a more accurate patient model.’” Pet. 41 (citing Ex. 1002, 5:11–15).

<sup>5</sup> US 6,363,163 B1, issued Mar. 26, 2002, filed Feb. 23, 1998 (Ex. 1019).

<sup>6</sup> WO 98/36683, published Aug. 27, 1998 (Ex. 1020).

<sup>7</sup> US 5,533,080, issued July 2, 1996 (Ex. 1018).

<sup>8</sup> Rothman, S. L. G. (1998). *Dental applications of computerized tomography: surgical planning for implant placement*. Chicago, IL: Quintessence Publishing Co. (Ex. 1016).

<sup>9</sup> WO 94/10908, published May 26, 1994 (Ex. 1015).

## ANALYSIS

### A. *Legal Standards*

#### 1. *Anticipation*

A patent claim is unpatentable under 35 U.S.C. § 102 if “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.”

*Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). “A single prior art reference may anticipate without disclosing a feature of the claimed invention if such feature is necessarily present, or inherent, in that reference.” *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 958 (Fed. Cir. 2014) (citing *Schering Corp. v. Geneva Pharm.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003)). Moreover, the reference must also “disclose[] within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim. . . .” *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). However, “the reference need not satisfy an *ipsissimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

#### 2. *Obviousness*

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular

case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the U.S. Court of Appeals for Federal Circuit has “repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor,” *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) (en banc). We note that, with respect to the fourth *Graham* factor, the parties have not presented argument or evidence directed to secondary considerations of nonobviousness. *See generally* Pet.; Prelim. Resp. The analysis below addresses the first three *Graham* factors.

*B. Level of Ordinary Skill in the Art*

Factors pertinent to a determination of the level of ordinary skill in the art include “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.*

Petitioner argues that a person having ordinary skill in the art “would include a person with an advanced medical degree, such as an MD, DDS, or DMD, and/or an advanced degree in Medical Physics, Physics, or a related field, and at least three years of experience in using and/or designing medical imaging devices, including CT imaging systems and/or densitometric imaging systems.” Pet. 14–15 (citing Ex. 1007 ¶¶ 52–55).

Petitioner further argues that the person having ordinary skill in the art “would be generally familiar with X-ray imaging, CT, X-ray tomosynthesis, densitometry, and medical and dental imaging, including the state of the art as of the priority date.” *Id.* (citing Ex. 1007 ¶¶ 52–55).

Patent Owner does not address the level of ordinary skill in the art in the Preliminary Response. *See generally* Prelim. Resp.

Accordingly, for purposes of institution, we adopt Petitioner’s proposed level of ordinary skill in the art, except that we delete the qualifier “at least” to eliminate vagueness as to the amount of practical experience. The qualifier expands the range indefinitely without an upper bound, and thus precludes a meaningful indication of the level of ordinary skill in the art.<sup>10</sup>

### *C. Claim Construction*

We construe claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2019). Specifically, we apply the principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc). Under that standard, the words of a claim are generally given their “ordinary and customary meaning,” which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips*, 415 F.3d at 1312–13.

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<sup>10</sup> If Patent Owner proposes a different level of ordinary skill in the art in its Response, the parties are encouraged to address whether there are any material differences between the two proposals and what impact, if any, the different level has on the obviousness analysis.

Petitioner requests—without providing any argument—that we adopt the district court’s claim construction of various terms from the Planmeca proceeding. *See* Pet. 15–18 (citing Ex. 1010). Patent Owner does not address Petitioner’s proposed constructions. *See generally* Prelim. Resp.

Because no express construction is needed to resolve any dispute in this proceeding, we do not construe any of the claim limitations. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

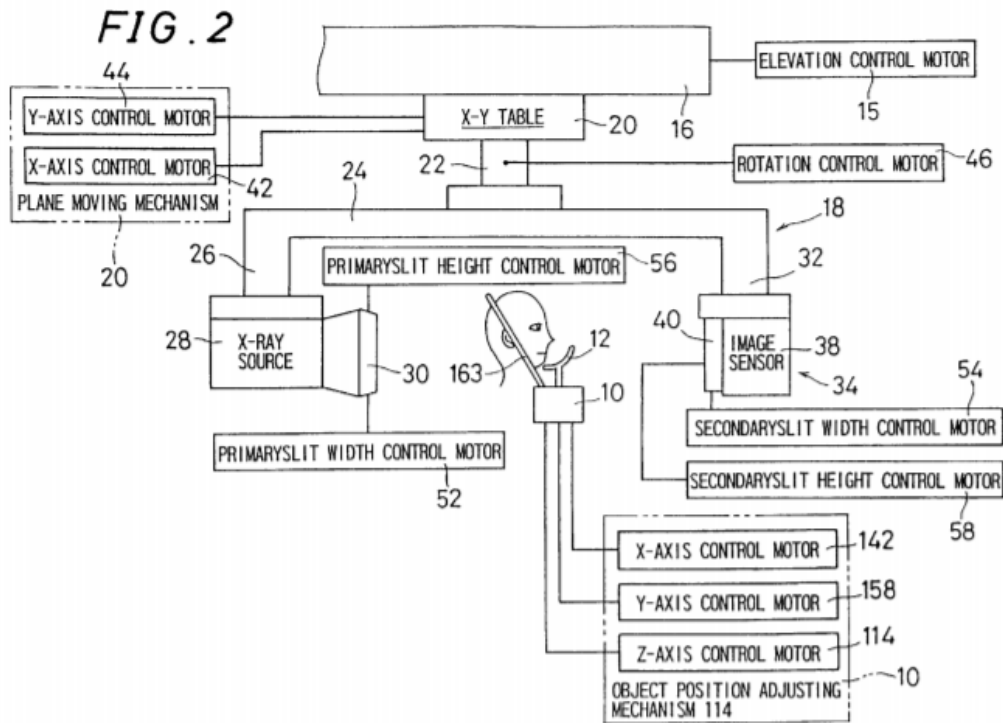
*D. Asserted Anticipation by Arai*

Petitioner argues Arai anticipates claims 1–4 and 6 of the ’301 patent. Pet. 28–41, 42–43. Based on the current record and for the reasons that follow, we are persuaded Petitioner has established a reasonable likelihood of prevailing on its asserted anticipation ground with respect to claims 1–4 and 6.

*1. Arai*

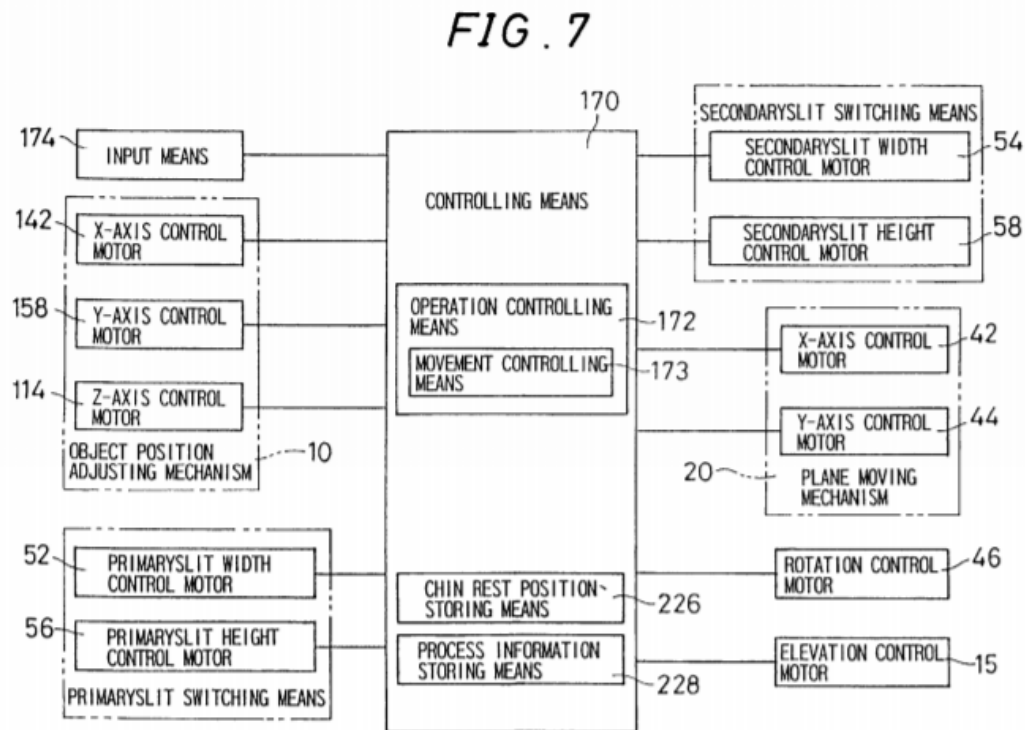
Arai is titled “X-ray Imaging Apparatus” and is directed to “an X-ray imaging apparatus which takes an image of an object such as a head of a human body along a desired tomographic plane.” Ex. 1013, code (54), 1:5–7). “An object of the invention is to provide a dual-purpose X-ray imaging apparatus capable of partial CT imaging in addition to panoramic tomographic imaging. Another object of the invention is to provide a dedicated partial X-ray CT imaging apparatus.” *Id.* at code (57).

Aria’s Figure 2 is reproduced below.



Aria's Figure 2 "is a block diagram showing an outline of the X-ray imaging apparatus." Ex. 1013, 8:32–33. Figure 2 depicts, *inter alia*, the patient, the X-ray source, an image sensor, and an object position adjusting mechanism "for positioning the chin rest at a predetermined position." *Id.* at Fig. 2, 12:42–45.

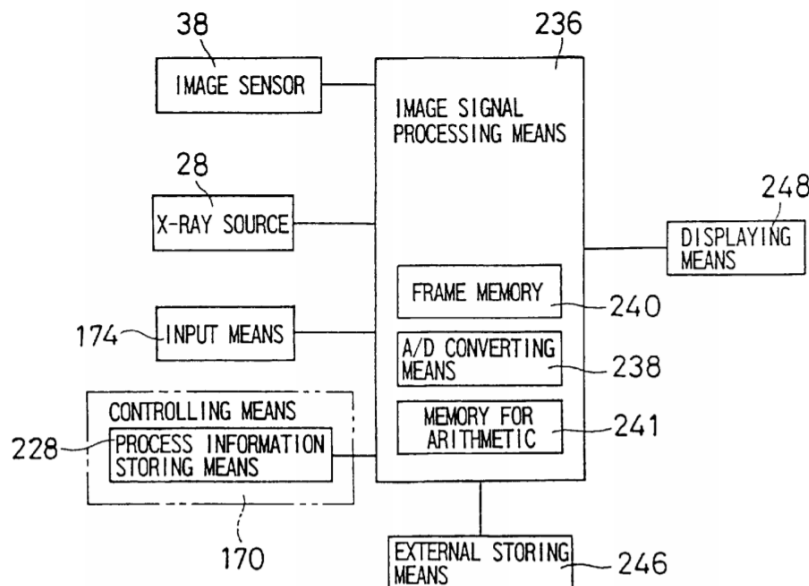
Aria's Figure 7 is reproduced below.



Arai's Figure 7 "is a block diagram showing a control system for various motors in the X-ray imaging apparatus." Ex. 1013, 8:43–44. Aria's Figure 7 depicts, *inter alia*, controlling means 170, which controls the operation of various motors, and process information storing means 228, which "stores CT process information for obtaining a partial CT image." *Id.* at Fig. 7, 15:62–16:3, 16:41–43.

Aria's Figure 9 is reproduced below.

**FIG. 9**



Arai's Figure 9 "is a block diagram showing an image signal processing system in the X-ray imaging apparatus." Ex. 1013, 8:48–49. According to Aria,

the image signal output from the image sensor 38 is supplied to image signal processing means 236. The image signal processing means 236 may be configured by, for example, a microprocessor for image processing. The image signal processing means 236 in the embodiment comprises A/D converting means 238 for converting an analog signal into a digital signal, a frame memory 240 which stores image information, and a memory for arithmetic 241. The image signal supplied from the image sensor 38 to the image signal processing means 236 is converted into a digital signal by the A/D converting means 238, and digital-converted image information is stored in the frame memory 240. Plural sets of image information stored in the frame memory 240 are stored in the image memory for arithmetic 241. A predetermined arithmetic process corresponding to the selected imaging mode is conducted on image information read out from the image

memory for arithmetic 241, thereby generating a tomographic image of the selected mode.

*Id.* at 17:30–48

2. *Analysis of Claim 1*

Claim 1 recites “[a] system for tomographically modeling dental and orthopedic structure densitometry.” Ex. 1002, 5:28–29. Petitioner argues that “[b]ecause the claim defines a structurally complete invention that has the capability to model densitometry,” the preamble recites “a non-limiting statement of purpose.” Pet. 29.

Petitioner argues Arai discloses “a controller with a microprocessor and a memory device connected to the microprocessor,” as recited in claim 1. *See* Pet. 32–34. Specifically, Petitioner directs us to controlling means 170, shown in Arai’s Figure 7, which Petitioner argues is a “microprocessor” and has a “memory device,” process information storing means 228. *Id.* at 32–33. Petitioner also directs us to image signal processing means 236, shown in Arai’s Figure 9, which Petitioner argues is a “microprocessor” and has “memory devices” frame memory 240, memory for arithmetic 241, and external storing means 246. *Id.* at 33–34.

Petitioner argues Arai discloses “said controller including means for storing a preexisting tomographical dental/orthopedic densitometry model,” as recited in claim 1. *See* Pet. 34–35. Specifically, Petitioner argues “Arai’s ‘image signal processing means 236’ stores CT models of dental structure in the ‘memory for arithmetic 241’ of the ‘image signal processing means 236’” and external storage means 246. *Id.* at 34 (citing Ex. 1013, 17:38–44, 18:11–15; Ex. 1007 ¶¶ 350–351).

Petitioner argues Arai discloses “an input device connected to the microprocessor,” as recited in claim 1. *See* Pet. 35. Specifically, Petitioner

directs us to “‘input means 174’ and ‘operation panel 176,’ which can be used by the operator to choose the imaging mode and input information relating to the object to be imaged.” *Id.* (citing Ex. 1013, 14:51–56, Figs. 7–9; Ex. 1007 ¶¶ 236, 352).

Petitioner argues Arai discloses “a positioning motor connected to the microprocessor and movable in response to [signals] from said microprocessor,” as recited in claim 1. *See* Pet. 35–36. Petitioner directs us to “X-axis control motor 42,” “Y-axis control motor 44,” and “rotation control motor 46,” all of which, Petitioner argues, “are responsive to signals from the controlling means’ microprocessor.” *Id.* (citing Ex. 1013 11:10–27, 15:52–16:6, Fig. 7; Ex. 1007 ¶¶ 237, 353).

Petitioner argues Arai discloses “X-ray equipment including an X-ray source and a detector array,” as recited in claim 1. *See* Pet. 36. Specifically, Petitioner argues “Arai includes an ‘X-ray source 28’ and ‘image sensor 38’” and that a person having ordinary skill in the art “would understand “image sensor” to be a detector array.” *Id.* (citing Ex. 1013, 10:27–38, Fig. 2; Ex. 1007 ¶¶ 238–239, 354).

Petitioner argues Arai discloses “conversion means for converting a signal from said detector array, said conversion means being connected to said detector array and to said microprocessor,” as recited in claim 1. *See* Pet. 37–38. Petitioner directs us to Arai’s A/D converting means 236, which Petitioner argues converts the analog signal from image sensor 38 into a digital signal. *Id.*

Petitioner argues Arai discloses “an output device connected to said microprocessor and adapted for receiving a tomographical densitometry model from said microprocessor,” as recited in claim 1. *See* Pet. 38. According to Petitioner, “Arai discloses two output devices capable of

receiving a tomographical densitometry model from the microprocessor of the image signal processing means: ‘external storing means 246’ and ‘displaying means 248.’” *Id.* (citing Ex. 1013, 18:3–15; Ex. 1007 ¶¶ 241, 356–357).

After reviewing Petitioner’s arguments and information, including the Maidment Declaration (Ex. 1007), which are not addressed by Patent Owner at this stage, we are persuaded that Petitioner demonstrates sufficiently, for purposes of this Decision, that Arai discloses each claim limitation recited in claim 1, and that each of the elements are arranged as in the claim. Accordingly, Petitioner has demonstrated, on this record, a reasonable likelihood of prevailing on its assertion that claim 1 is anticipated by Arai.

### 3. *Analysis of Claims 2–4 and 6*

Because Petitioner has demonstrated a reasonable likelihood of success in proving that at least one claim of the ’301 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (indicating that a decision whether to institute an *inter partes* review “requires a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”); Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019 (“CPTG”), 5<sup>11</sup> (“In instituting a trial, the Board will either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution. The Board will not institute on fewer than all claims or all challenges in a petition.” (citations omitted)). Therefore, at this stage of the proceeding, it is not necessary for us to provide a detailed assessment of

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<sup>11</sup> Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

every challenge raised by Petitioner, especially as Patent Owner has not presented any responsive argument.

Nevertheless, we note that Petitioner provides detailed explanations supported by the testimony of Dr. Maidment, and specific citations to Arai indicating where in the reference Petitioner argues the limitations of claims 2–4 and 6 are disclosed. Pet. 39–41, 42–43. Accordingly, at this stage of the proceeding, we are persuaded the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail with respect to claims 2–4 and 6.

*E. Other Challenges*

As noted above, because Petitioner has demonstrated a reasonable likelihood of success in proving that at least one claim of the '301 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. Therefore, at this stage of the proceeding, it is not necessary for us to provide a detailed assessment of every ground raised by Petitioner, especially as Patent Owner has not presented any responsive argument.

Nevertheless, we note that Petitioner provides detailed explanations supported by the testimony of Dr. Maidment and specific citations to the relevant references indicating where in the reference Petitioner argues the limitations of claims 1–8 and 10–20 are taught, and why a person of ordinary skill in the art would have combined the teachings of the relevant references. See Pet. 28–75. Accordingly, at this stage of the proceeding, we are persuaded the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail with respect to claims 1–8 and 10–20 based on the other grounds in the Petition.

*F. Discretionary Denial Under 35 U.S.C. § 314(a)*

Patent Owner argues that we should exercise our discretion and deny institution based on a trial scheduled for October 2020<sup>12</sup> in the Planmeca proceeding.<sup>13</sup> Prelim. Resp. 1–12. We note, however, that Petitioner is not a participant in the Planmeca proceeding, but Petitioner is a participant in the Kavo proceeding that is currently stayed.

Under § 314(a), the Director has discretion to deny institution of an *inter partes* review. *See* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS*, 138 S. Ct. at 1356 (“[Section] 314(a) invests the Director with discretion on the question whether to institute review . . . .” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

In *NHK*, the Board denied institution relying, in part, on § 314(a) because the parallel district court proceeding was scheduled to finish before the Board reached a final decision. *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential). “Thus, *NHK* applies to the situation where the district court has set a trial date to occur earlier than the Board’s deadline to issue a final written decision in an

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<sup>12</sup> The trial was originally set for May 18, 2020, but was postponed due to a court closure associated with Covid-19. *See* Ex. 2006, 2 (D.I. 18) (setting May 2020 trial date); Ex. 2015 (resetting trial date).

<sup>13</sup> Claim 1–9 of the ’301 patent are at issue in both the Kavo and Planmeca proceedings. *Compare* Ex. 2001 ¶¶ 14–19 (Complaint for Planmeca proceeding) *with* Ex. 2008 ¶¶ 15–22 (Complaint for Kavo proceeding).

instituted proceeding.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 3 (PTAB Mar. 20, 2020) (precedential) (Order). When determining whether to exercise discretion to deny institution under *NHK* due to an earlier trial date, we consider the following factors (“*Fintiv* factors”):

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

*Id.* at 6. “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* (citing CTPG, 58.). We address the *Fintiv* factors *in seriatim* below.

*1. Whether a Stay Exists or Is Likely to Be Granted if a Proceeding Is Instituted*

The Kavo proceeding, in which Petitioner is a defendant, “is stayed pending the results of Kavo’s petitions based on a *joint request*.” Pet. Prelim. Reply 5 (citing Ex. 2013). This factor weighs against exercising discretion to deny institution. The stay of the Kavo proceeding allays

concerns about inefficiency and duplication of efforts as it relates to this proceeding. *See Fintiv*, Paper 11 at 6.

As to the Planmeca proceeding, the *Fintiv* Order explains, “Even when a petitioner is unrelated to a defendant, however, if the issues are the same as, or substantially similar to, those already or about to be litigated, or other circumstances weigh against redoing the work of another tribunal, the Board may, nonetheless, exercise the authority to deny institution.” *Fintiv*, Paper 11 at 14.

Petitioner argues that because it is not a party to the Planmeca proceeding, Petitioner has no way of knowing whether a stay will be granted in that case. Pet. Prelim. Reply 4.

Patent Owner argues the Planmeca proceeding is not stayed and given its advanced stage and proximity to trial, “the Delaware court is not likely to stay the case even if the petitions were instituted and Planmeca made such a motion.” PO Prelim. Sur-reply 4.

Petitioner is in no position to offer evidence about a stay in the Planmeca proceeding because Petitioner is not a party to that proceeding. This proceeding may be a basis to deny institution if the issues are the same as, or substantially similar to, those already or about to be litigated, or other circumstances weigh against redoing the work of another tribunal. *See Fintiv*, Paper 11 at 14. In the event that there may be duplicative efforts, we inquire further as to whether the district court would render a decision before this proceeding as examined below under *Fintiv* factor 2, and the degree of overlap of the proceedings under *Fintiv* factor 4. *Fintiv* at 6 (explaining that there is some overlap among the factors).

2. *Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline*

As noted above, the Kavo proceeding is stayed pending this resolution of this proceeding, which weighs in against exercising our discretion to deny institution. Pet. Prelim. Reply 5. Both Petitioner and Patent Owner agree that the Planmeca proceeding is scheduled for a trial in October 2020. Pet. Prelim. Reply 6; PO Prelim Sur-reply 1, 5–6; *see also* Ex. 2015 (Order Rescheduling Trial). Because the Planmeca trial is scheduled approximately eight months before a Final Written Decision would be due in this case, this factor weighs in favor of exercising our discretion to deny institution. *See Fintiv*, Paper 11 at 9 (“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.”)

3. *Investment in the Parallel Proceeding by the Court and Parties*

Petitioner acknowledges that “[t]he Delaware court has clearly invested time and effort in the Planmeca [proceeding].” Pet. Prelim Reply 6. Petitioner argues, however, that “apart from *Markman* proceedings—the results of which Kavo adopted in its petitions—none of that effort bears on the distinct invalidity challenges raised in Kavo’s petitions.” *Id.*

Petitioner also argues that there was no delay in filing the Petition. Pet. Prelim. Reply 7. Specifically, Petitioner argues it filed the Petition approximately two months after Patent Owner filed its infringement contentions and Petitioner filed its invalidity contentions in the Kavo proceeding. *Id.*

Patent Owner argues that “[t]he court in the Planmeca [proceeding] has issued substantive rulings, including a claim construction order and orders denying motions to strike the expert reports relating to the same

patents at issue in these petitions.” PO Prelim. Sur-reply 6; *see* Prelim. Resp. 7–8 (noting the status of the Planmeca proceeding). Patent Owner further argues that summary judgment and *Daubert* motions have been fully briefed and argued. PO Prelim. Sur-reply 7. Patent Owner also argues that although the Kavo proceeding is not in an advanced stage, “Petitioner has benefited from [the Planmeca proceeding] as evidenced from Petitioner’s reliance on that court’s claim construction, [which] is significant and weighs heavily in favor of denial.” *Id.*

It is clear that the district court in the Planmeca proceeding has invested substantial resources into the case. With the exception of the *Markman* Order, however, Patent Owner has not sufficiently shown how the investment relates to the issue before us. That is, although summary judgment and *Daubert* motions have been briefed and argued, Patent Owner has not sufficiently shown that those issue are relevant here.

Accordingly, because the investment made by the court and the Patent Owner is in a proceeding in which Petitioner is not a party and Patent Owner has not demonstrated persuasively how this investment leads to an inefficient duplication of resources if this Petition is instituted, we find this factor weighs against exercising our discretion to deny.

4. *Overlap Between Issues Raised in the Petition and in the Parallel Proceeding*

Petitioner argues that Planmeca’s section 282 statement does not identify any of the lead references of this Petition—Arai and Pelc. Pet. Prelim. Reply 8 (citing Ex. 1039).

Patent Owner acknowledges that the Petition involves different primary references than the Planmeca proceeding, but argues that “the prior art that Petitioner presents requires consideration of issues . . . are

cumulative to those presented in the Planmeca [proceeding].” Prelim. Sur-reply 7; *see also* PO Prelim. Resp. 9–10 (arguing that Petitioner’s arguments essentially dupliucare those of the Planmeca proceeding).

Based on the record, we are not persuaded by Patent Owner’s argument that Arai and Pelc are cumulative to the references Planmeca is relying on. Patent Owner simply offers a conclusory statement, without any support or discussion. Because the Petition “includes materially different grounds, arguments, and/or evidence than those presented in the district court,” this factor weighs against exercising discretion to deny institution. *Fintiv*, Paper 11 at 12–13 (citations omitted).

5. *Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

Petitioner argues it is not a party to the Planmeca proceeding. Pet. Prelim. Reply 9.

“Patent Owner acknowledges that Petitioner is not a party to the Planmeca [proceeding] . . . .” PO Prelim. Sur-reply 8. Patent Owner argues, however, that “this factor is not dispositive.” *Id.* Patent Owner further argues “the significant efficiencies of denial and consideration of other factors, viewed holistically, favor denial.” *Id.* at 8–9 (citing *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 at 2 (PTAB Apr. 2, 2019) (precedential)); *see also* Prelim. Resp. 8–9 (“In other contexts, such as a later-filed petition, the Board has found that identity of the parties is not dispositive and has exercised its discretion to deny institution.”).

“If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution under *NHK*.” *Fintiv*, Paper 11 at 13–14 (citations omitted).

Because there is no dispute that Petitioner is unrelated to the defendant in the Planmeca proceeding, this factor weighs against us exercising discretion.

We do not find Patent Owner's reliance on *Valve* persuasive. In *Valve*, Valve Corporation ("Valve")—the petitioner—had a preexisting relationship with HTC Corporation and HTC America, Inc. (collectively, "HTC"), which had filed an earlier petition. *See Valve*, Paper 11 at 9–10. Specifically, both Valve and HTC were accused of patent infringement based on the same product, "namely HTC's VIVE devices that incorporate technology licensed from Valve," and that Valve employees provides HTC with technical assistance during the development of the accused devices. *Id.* (citations omitted). In contrast, in this case, Patent Owner has not alleged any relationship between Petitioner and Planmeca. Simply being accused of infringing the same patent is not a sufficient relationship. Accordingly, we find that this factor strongly weighs against us exercising discretion to deny institution.

6. *Other Circumstances that Impact the Board's Exercise of Discretion, Including the Merits*

Petitioner argues Patent Owner's arguments are not "frank and fair." Pet. Prelim. Reply 10. Petitioner further argues that the Petition contains "a wealth of prior art[, which] provides more than sufficient basis for this Board to institute *inter partes* review and hold the challenged claims unpatentable," while Patent Owner does not present any arguments directed to the merits. *Id.*

Patent Owner argues although Petitioner "repeats the [district] court's construction [of densitometry/tomographic modeling and/or tomographic models] and adopts it as its own, Petitioner made no effort to explain how the prior art teaches this limitation." PO Prelim. Sur-reply 9. Patent Owner

further argues Petitioner waited “until just six weeks before the statutory deadline and several week after the summary judgment arguments in the Planmeca [proceeding]” to file the Petition. *Id.* at 10.

We are not persuaded by either parties’ arguments on this point. Although Petitioner waited until towards the end of the statutory period, Patent Owner waited eighteen months between filing complaints in the Planmeca proceeding and Kavo proceeding. That period of delay in filing the Kavo proceeding accounts for a large portion of the prejudice Patent Owner alleges.

Nor do we agree with the parties’ remaining arguments. Petitioner has not sufficiently shown that Patent Owner has not come forward with clean hands. And Patent Owner relies on conclusory attorney argument—which is not persuasive—to attack the sufficiency of the evidence in the Petition. Accordingly, we find this a neutral factor.

#### 7. *Balancing the Fintiv Factors*

We have considered the circumstances and facts before us in view of the *Fintiv* factors. Because our analysis is fact driven, no single factor is determinative of whether we exercise our discretion to deny institution under § 314(a). Based on the facts of this case, , the stay in the Kavo proceeding involving Petitioner allays concerns about inefficiency and duplication of efforts as it relates to issues raised by the parties in that parallel proceeding. Further, the challenges raised in the Petition are not the same as, or substantially similar to, those about to be litigated in the Planmeca proceeding, which does not involve Petitioner as a party. Thus, the risk of duplicate work between the Planmeca proceeding and this *inter partes* review is *de minimis*. Even if the patents are found not to be invalid in the Planmeca proceeding, the patents will be subject to a second validity

challenge by Petitioner. Patent Owner has not argued persuasively that it would be more efficient for that challenge to be held in the Kavo proceeding as opposed to before the Board.

Balancing all of the factors, on this record, we determine that the circumstances presented here weigh against exercising discretion under § 314(a) to deny institution of *inter partes* review.

### CONCLUSION

Under 35 U.S.C. § 314, we are to determine whether the totality of the information presented at this stage shows there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. For the reasons expressed above, we determine that Petitioner has established the requisite reasonable likelihood of prevailing as to claims 1–9 and 10–20 of the '301 patent.

Our factual findings, conclusions of law, and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. This is not a final decision as to the patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record as fully developed during trial.

### ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review of all challenged claims of the '301 patent is instituted with respect to all challenges set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '301 patent is hereby instituted commencing on the entry date of this Decision, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

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