

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PETROLEUM GEO-SERVICES INC.,
and
ION GEOPHYSICAL CORPORATION
AND ION INTERNATIONAL S.A.R.L.,
Petitioner,

v.

WESTERNGECO LLC,
Patent Owner.

Case IPR2014-00688¹
Patent 7,080,607 B2

Before BRYAN F. MOORE, SCOTT A. DANIELS, and
BEVERLY M. BUNTING, *Administrative Patent Judges*.

DANIELS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

¹ Case IPR2015-00567 has been joined with this proceeding.

I. INTRODUCTION

A. Background

Petroleum Geo-Services (“Petitioner,” or “PGS”) filed a Petition to institute an *inter partes* review of claims 1 and 15 of U.S. Patent No. 7,080,607 B2 (“the ’607 patent”).² Paper 1 (“PGS Pet.”). WesternGeco LLC (“Patent Owner”) timely filed a Preliminary Response. Paper 26 (“First Prelim. Resp.”). We instituted trial in *Petroleum Geo-Services, Inc., v. WesternGeco L.L.C.*, Case IPR2014-00688, (the “PGS IPR”), for claims 1 and 15 of the ’607 patent on certain grounds of unpatentability alleged in the Petition. Paper 33 (“Decision to Institute” or “Inst. Dec.”). Patent Owner, in due course, filed a Response. Paper 44 (“Response”). Petitioner subsequently filed a Reply. Paper 78 (Reply).

In a separate proceeding, *ION Geophysical Corporation and ION International S.A.R.L., v. WesternGeco L.L.C.*, Case IPR2015-00567 (PTAB Jan. 14, 2015) (the “ION IPR”), ION Geophysical Corporation and ION International S.A.R.L. (“ION”) also filed a Petition to institute an *inter partes* review of claims 1 and 15 of the ’607 patent. Paper 3 (“ION Pet.”). With their Petition, ION also filed a Motion for Joinder, Paper 4 (“Mot.”), seeking to join the ION IPR with the PGS IPR. Mot. 2. Patent Owner filed an Opposition to ION’s Motion for Joinder. Paper 10 (“Opp.”). We instituted trial in the ION IPR and granted ION’s Motion for Joinder. Paper

² The Petition was initially accorded the filing date of April 23, 2014. Paper 6. Following submission of an updated Mandatory Notice (Paper 18) on August 5, 2014, including additional real-parties-in-interest, the filing date of the Petition was changed to August 5, 2014 and we exercised our discretion under 37 C.F.R. § 42.5(c) to set a new deadline for Patent Owner’s preliminary response. Paper 22, 6.

IPR2014-00688

Patent 7,080,607 B2

14 (“ION Decision to Institute” or “ION Inst. Dec.”). We ordered ION not to file papers, engage in discovery, or participate in any deposition or oral hearing in IPR2014-00688 without obtaining authorization. ION was, however, permitted to appear in IPR2014-00688 so that it could receive notification of filings and attend depositions and the oral hearing. Patent Owner subsequently filed a Preliminary Response to ION’s Petition. Paper 70 (“ION Prelim. Resp.”).

In addition, Petitioner filed a Motion to Exclude. Paper 85. Patent Owner filed an Opposition to Petitioner’s Motion to Exclude (Paper 90), and Petitioner filed a Reply. Paper 94. Also, Petitioner filed three Motions to Seal (Papers 81, 87, and 97), and Patent Owner filed a Motion to Seal. Paper 91.

An oral hearing was held on July 30, 2015. A transcript of the hearing is included in the record. Paper 100 (“Tr.”).

The Board has jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has proven, by a preponderance of the evidence, that claims 1 and 15 of the ’607 patent are unpatentable.

B. Additional Proceedings

Lawsuits involving the ’607 patent presently asserted against Petitioner include *WesternGeco LLC v. Petroleum Geo-Services, Inc.*, 4:13-cv-02725 (the “PGS lawsuit”) in the Southern District of Texas and *WesternGeco LLC v. ION Geophysical Corp.*, 4:09-cv- 01827 (the “ION lawsuit”) also in the Southern District of Texas. ION Pet. 8.

The ’607 patent is related to the patents involved in IPR2014-00687 and IPR2014-00689.

IPR2014-00688

Patent 7,080,607 B2

C. The '607 Patent

The '607 patent (Ex. 1001), titled “Seismic Data Acquisition Equipment Control System,” generally relates to a method and apparatus for improving marine seismic survey techniques to more effectively control the movement and positioning of marine seismic streamers towed in an array behind a boat. Ex. 1001, 1:16–24. As illustrated in Figure 1 of the '607 patent reproduced below, labeled “Prior Art,” a seismic source, for example air gun 14, is towed by boat 10 producing acoustic signals, which are reflected off the earth below. *Id.* The reflected signals are received by hydrophones (no reference number) attached to streamers 12, and the signals “digitized and processed to build up a representation of the subsurface geology.” *Id.* at 1:31–33.

Fig.1.
Prior Art

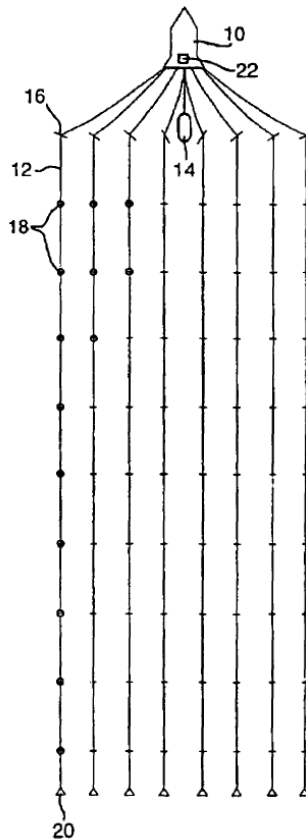


Figure 1, above, depicts an array of seismic streamers 12 towed behind vessel 10.

In order to obtain accurate survey data, it is necessary to control the positioning of the streamers, both vertically in the water column, as well as horizontally against ocean currents and forces which can cause the normally linear streamers to bend and undulate and, in some cases, become entangled with one another. *Id.* at 1:42–2:16. As illustrated in Figure 1, above, each streamer is maintained in a generally linear arrangement behind the boat by deflector 16 which horizontally positions the end of each streamer nearest the boat. *Id.* at 3:37–46. Drag buoy 20 at the end of each streamer farthest

from the vessel creates tension along the streamer to maintain the linear arrangement.

To control the position and linear shapes of the streamers, a plurality of streamer positioning devices, called “birds” 18 or “SPD’s” (streamer positioning devices), are attached along the length of each streamer. *Id.* at 3:47–49. The birds are horizontally and vertically steerable and control the shape and position of the streamer in both vertical (depth) and horizontal directions. *Id.* at 3:49–55. The birds’s job is usually to maintain the streamers in their linear and parallel arrangement, because when the streamers are horizontally out of position, the efficiency of the seismic data collection is compromised. *Id.* at 2:5–7. The most important task of the birds, however, is to keep the streamers from tangling. *Id.* at 3:65–66.

To control the birds and the array of streamers, the ’607 patent describes a distributed control system using global control system 22 located on the vessel and a local control system at each bird to maintain the streamers in their particular linear and parallel arrangement. *Id.* at 3:56–60. In an embodiment of the described control system, global control system 22 “maintains a dynamic model of each of the seismic streamers” that takes into account the behavior of the entire array and uses desired and actual positions of the birds to “regularly calculate updated desired vertical and horizontal forces the birds should impart on the seismic streamers 12 to move them from their actual positions to their desired positions.” *Id.* at 4:28–34, 48–50.

The ’607 patent further explains that there is a time delay between when the positions of the birds are measured and the “actual positions” of the birds used to determine the vertical and horizontal forces. *Id.* at 4:51–55.

To account for the time delay “the global control system 22 runs position predictor software to estimate the actual locations of each of the birds 18.” *Id.* at 4:53–55. Once these forces are determined, “[t]he global control system will preferably send the following values to the local bird controller: vertical force, demanded horizontal force, towing velocity, and crosscurrent velocity.” *Id.* at 4:67–5:3.

The specification explains that these forces are capable of being implemented by a bird as shown in Figure 2 of the '607 patent, reproduced below.

Fig.2.

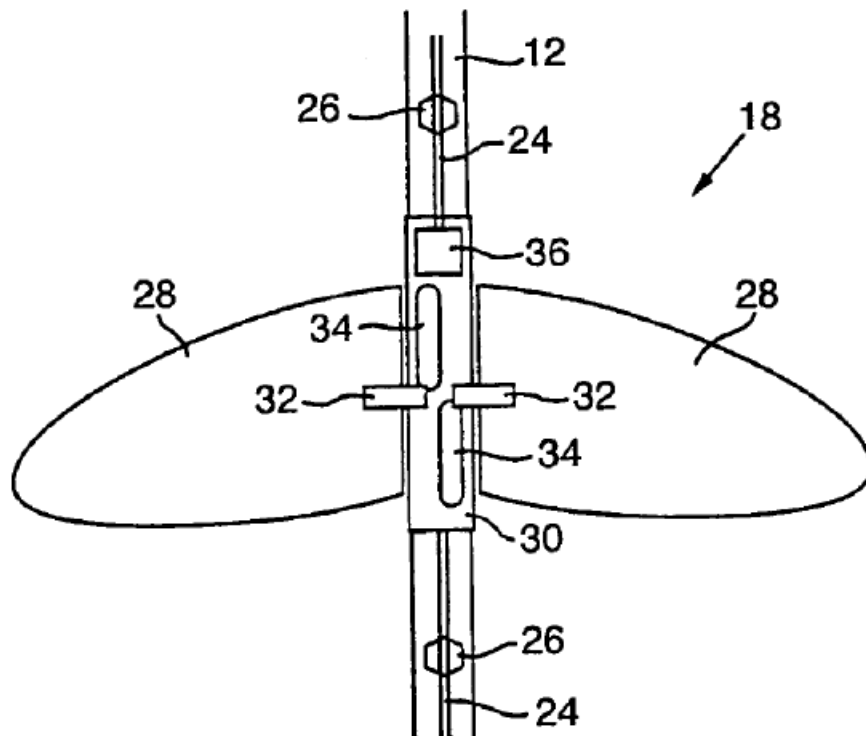


Figure 2 of the '607 patent, above, illustrates bird 18 and local controller 36 positioned on streamer 12 where bird 18 is controlled in both horizontal and

IPR2014-00688

Patent 7,080,607 B2

vertical directions by wings 28 actuated by wing motors 34. *Id.* at 5:27–51.

The specification of the '607 patent describes that the position of streamer 12 is effected when “local control system 36 controls the movement of the wings 28 by calculating a desired change in the angle of the wings and then selectively driving the motors 34 to effectuate this change.” *Id.* at 5:55–58.

D. Illustrative Claim

Claims 1 and 15 are independent. Claim 1 is a method claim and claim 15, reproduced below, an apparatus claim, illustrates the claimed subject matter:

15. An array of seismic streamers towed by a towing vessel comprising:

(a) a plurality of streamer positioning devices on or inline with each streamer;

(b) a *prediction unit* adapted to predict positions of at least some of the streamer positioning devices; and

(c) a control unit adapted to use the predicted positions to *calculate desired changes* in positions of one or more of the streamer positioning devices.

Ex. 1001, 12:27–34 (emphasis added).

E. The Instituted Grounds of Unpatentability

Petitioner contends that the challenged claims are unpatentable on the following specific grounds.³

³ Petitioner supports its challenge with Declarations of Dr. Brian J. Evans, Ph.D. (Ex. 1002) (“Evans Decl.”) and Dr. Jack H. Cole, Ph.D. (Ex. 1003) (“Cole Decl.”). *See infra*.

References	Basis	Claims Challenged
Workman ⁴	§ 102	1 and 15
Workman	§ 103	1 and 15
Workman and Elholm ⁵	§ 103	1 and 15

II. CLAIM CONSTRUCTION

A. *Legal Standard*

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC.*, 778 F.3d 1271, 1278–82 (Fed. Cir. 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation.”). Claim terms are given their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). If the specification “reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess[,] . . . the inventor’s lexicography governs.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)).

If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and

⁴ Ex. 1004, U.S. Patent No. 5,790,472 (Aug. 4, 1998).

⁵ Ex. 1005, U.S. Patent No. 5,532,975 (July 2, 1996).

precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). If a feature is not necessary to give meaning to what the inventor means by a claim term, it would be “extraneous” and should not be read into the claim. *Renishaw PLC*, 158 F.3d at 1249; *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988). Only terms which are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

We apply these general rules in construing the claims of the '607 patent.

In our Decision to Institute we determined that a “streamer positioning device” is “a device that positions a streamer as it is towed.” Inst. Dec. 8–9. We also determined that “predicting positions,” means “estimating the actual locations.” *Id.* at 9. Based on the full record developed during trial, we adopt those constructions for purposes of this Decision. Because Patent Owner disagrees with our interpretation of “predicting positions” and also proposes a claim construction for the phrase “calculate desired changes” as recited in claims 1 and 15, we provide below additional analysis and the appropriate claim construction for both these claim limitations. *See* PO Resp. 6–14.

B. Predicting Positions

We determined in the Decision to Institute that “predicting positions” means “estimating the actual locations.” Inst. Dec. 9. Patent Owner disagrees with this construction and contends that the broadest reasonable interpretation of “predicting positions” is “determining positions using a *behavior-predictive model*.” PO Resp. 6 (emphasis added). Patent Owner argues that “[t]he intrinsic evidence requires that ‘predicting positions’

IPR2014-00688

Patent 7,080,607 B2

addresses the time lag between positional measurements and steering commands arriving at the streamer positioning device, as well as the forces acting on the streamer.” PO Resp. 7 (citing Ex. 1001, 4:8–14, 48–55, 5:4–16; Ex. 2042 ¶¶ 40, 57, 64–65, 87–88.). Petitioner’s position is that our construction in the Decision to Institute is correct. Reply 5.

Patent Owner argues that the proper understanding of “predicting positions” begins with the plain and ordinary meaning of the word “predicting” as having a temporal aspect, which must be accounted for in the broadest reasonable interpretation. PO Resp. 7. Patent Owner points to an ordinary meaning from WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, (Ex. 2066) defining “prediction” as “an inference regarding a *future* event based on probability theory.” PO Resp. 10 (citing Ex. 2066) (emphasis added by Patent Owner). We agree with Patent Owner, at least to the extent that an ordinary meaning of the word “predict[ing]” can generally be understood as having a temporal aspect relating to the future. Patent Owner states further in their Response that:

[p]redictive control as recited in claims 1 and 15 requires a prediction as to (1) where the streamer positioning device will be at the time when commands are received at the device and (2) taking into consideration the forces acting on the streamer. (Ex. 2042, ¶¶ 40, 64-65, 87-88.)

Id. at 7. First, we note that neither claim 1 nor claim 15 recites “predictive control” as stated here by Patent Owner. *See* Ex. 1001, 11:15–24, 12:26–34. Second, with respect to point (1), our claim construction accounts for exactly this temporal, i.e. future, aspect of “predicting.” As explained in our Decision to Institute:

the received position data of any bird 18 is old, i.e., not instantaneous, or current, but is used to estimate a position of bird 18, and assess the estimate as an *actual* position of bird 18.

Inst. Dec. 9. Our claim construction relies specifically on the nature of the temporal component described in the '607 patent specification which states “the global positioning system runs position predictor software to estimate the actual locations of each of the birds 18.” Ex. 1001, 4:51–55. Based on the specification, the estimated “actual locations” recited in our construction is a *future* prediction relative to the old (measured) position data that takes into account the time delay, or lag, and as stated in Patent Owner’s point (1) above. The “actual location” in our claim construction is “where the streamer positioning device will be at the time when commands are received at the device” as contended by Patent Owner. *See* PO Resp. 7.

Turning to Patent Owner’s point (2), here Patent Owner argues that the broadest reasonable interpretation of “predict[ing] positions” must consider not only positional data, but also force data. *Id.* Patent Owner contends that the specification is clear that “predicting positions” requires “behavior prediction” and that “[b]ehavior prediction is more sophisticated than simply estimating the actual locations.” *Id.* at 9–10. To support its position that a “behavior-predictive model” should be part of the construction Patent Owner draws our attention to certain portions of the specification that discuss control of the streamer positioning devices:

the inventive control system utilizes a distributed processing control architecture and behavior-predictive model-based control logic to properly control the streamer positioning devices.

Ex. 1001, 4:11–14. Also,

[t]he global control system 22 preferably maintains a dynamic model of each of the seismic streamers 12 and utilizes the desired and actual positions of the birds 18 to regularly calculate updated desired vertical and horizontal forces the bird

should impart on the seismic streamers 12 to move them from their actual positions to their desired positions.

Id. at 4:28–33. And,

[t]he global control system 22 preferably calculates the desired vertical and horizontal forces based on the behavior of each streamer and also takes into account the behavior of the complete streamer array.

Id. at 4:48–51. Using these specification examples, Patent Owner includes “behavior-predictive model” in its claim construction for “predict[ing] positions” as part of the overall dynamic model defining the streamer array and “predicts the effects of the forces resulting from operation of the system itself, such as the effects that controlling one streaming positioning device will have on others.”⁶ PO Resp. 11 (citing Ex. 1001, 4:10–14, Ex. 2042 ¶¶ 59–65, 87–88). We must take care, however, when reading a patent specification to interpret and understand the claims and requisite claim language in light of the disclosure, while not inappropriately importing variations and specific embodiments into a claim interpretation. *See Superguide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.”).

A claim construction analysis begins with, and is centered on, the claim language itself. *See Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). Claims 1 and 15, recite the limitation

⁶ Claim 1 recites “predicting positions” in the nature of a method claim, whereas claim 15, an apparatus claim, recites “a prediction unit adapted to predict positions.” We understand no substantive difference between these two claim terms and our analysis and construction applies equally to both.

IPR2014-00688

Patent 7,080,607 B2

“predict[ing] positions.” A plain meaning of the word “position” is “the point or area occupied by a physical object.” MERRIAM WEBSTER ONLINE DICTIONARY, <http://www.merriam-webster.com/dictionary/position> (last visited Dec. 4, 2015). On its face, therefore, the word itself does not impart any dynamic characteristic to the limitation as a whole. The claims also do not recite the terms “dynamic model,” “behavioral-predictive model,” or “force.” It is understood from a plain reading of the claims, that the “predicted positions” are used, for example as recited in claim 15 “by a control unit . . . to calculate desired changes in positions of one or more of the streamer positioning devices.” This at least implies that to *control* the streamer positioning device some force will be imparted by the streamer positioning device based on the control units’ calculations. It does not however, express to the reader that such forces utilized in a dynamic or behavior-predictive model, are required by the prediction unit to “predict positions.”

Addressing the specific portions of the ’607 patent relied upon by Patent Owner, these examples discuss dynamic model, streamer and SPD behavior including, calculated forces and estimated actual locations of the SPD’s as separate functional elements or components of a “global control system 22.” *See* Ex. 1001, 4:48–55. The specification states explicitly that these are preferred embodiments. *Id.* “While . . . claims are to be interpreted in light of the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998) (citation omitted). Patent Owner’s construction would require the term “predict[ing] positions” to include a “behavior-predictive model,” a term that is recited only one time in the specification

IPR2014-00688

Patent 7,080,607 B2

and without any specific definition, other than as “control logic to properly control the streamer positioning device.” Ex. 1001, 4:16–20. We are not persuaded from the claim language itself or the written description of the ’607 patent that the “behavior-predictive model” to control all the streamer positioning devices in the array should necessarily be read into “predict[ing] positions” as recited in claims 1 and 15.

Patent Owner also relies upon the testimony of its Declarant, Dr. Triantafyllou, in support of its position that “predicting positions” requires a behavior-predictive model. PO Resp. 10–12 (citing Ex. 2042 ¶¶ 36, 59–65, 87–88. Dr. Triantafyllou has over 40 years of experience in the field of marine vehicle dynamics and control. Ex. 2042 ¶ 1. He has a bachelor’s degree in Naval Architecture and Marine Engineering, as well as a Master of Science and Mechanical Engineering, a Master’s of Science in Ocean Engineering, and a Ph.D in Ocean Engineering from MIT. *Id.* at ¶ 2. Since 1979, Dr. Triantafyllou has been an MIT faculty member and professor, including Director of the Center for Ocean Engineering at MIT, as well as a visiting research scientist at the Woods Hole Oceanographic Institute. *Id.* at ¶¶ 6, 9. We understand from Dr. Triantafyllou’s testimony, that in a large array of towed seismic streamers, it is particularly helpful to synchronize all the streamer positioning devices that control the numerous parallel streamers, and “to continuously coordinate all the streamer positioning devices in the array, combined with a behavior-based predictive model, and then send commands to each local control system helps prevent the type of overcorrection that can increase the likelihood of streamer tangling.” Ex. 2042 ¶ 71. Although Dr. Triantafyllou’s testimony is helpful in understanding how the specification of the ’607 patent attempts to describe the preferred aspects of the invention disclosed therein, for example that the

behavior-predictive model “uses past information and knowledge about the dynamics of a system to determine how that system configuration will change over time,” his testimony does not explain why, as discussed above, we should interpret the claim term “predicting positions” as requiring a preferred embodiment from the specification. Ex. 2042 ¶ 65, *see also* Ex. 1001, 4:11–13 (In an embodiment described in the specification “[t]he global control system 22 preferably maintains a dynamic model of each of the seismic streamers 12.”)

In the instant case, Patent Owner has not brought any language from the specification to our attention where Patent Owner purported to be its own lexicographer and defined “predict[ing] positions” in a manner that requires a behavior-predictive model relying on dynamics of the system as a whole. It is well settled that “claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words of expressions of manifest exclusion or restriction.” *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1381 (Fed. Cir. 2009).

To the extent the term “predicting positions” needs any interpretation, we determine based on the specification, claim language, and evidence from the complete record before us, that under the broadest reasonable interpretation, and giving the words their plain and ordinary meaning consistent with the specification that, “predicting positions,” means “estimating the actual locations.”

C. Calculate Desired Changes

Patent Owner contends that the broadest reasonable interpretation of “calculate desired changes” as recited in claims 1 and 15 is to “determine forces based on streamer and array behavior.” Patent Owner argues that this claim limitation “requires the desired changes to take into account not only

the streamer on which the streamer positioning device is located, but also the complete streamer array.” PO Resp. 12. We are not persuaded to read such a limitation into this claim phrase. First, in the context of both claim 1 and claim 15, the phrase is more completely, “calculate desired changes in positions.” The plain meaning of, “calculate,” is essentially interchangeable with “determine,” thus we see no reason to clarify this aspect of the claim language. The direct object of the verb “calculate” is “changes in position” of the SPD, thus the proposed claim construction would substitute “forces based on streamer and array behavior” for “changes in position.” The asserted claim construction, however, naturally expresses *how* changes in position are, or could be accomplished. For example, “force” acting on an object is, from a physics perspective, a different quantity than the “position” of the object. A certain force may cause a change in position but it is not the “change in position” itself. We are, therefore, not persuaded by the plain meaning of the claim language that “changes in position” is required to be limited to any particular causal definition or quantity.

Patent Owner’s claim construction relies upon preferred embodiments from the specification, for example, the specification states that “[t]he global control system 22 *preferably* calculates the desired vertical and horizontal forces based on the behavior of each streamer and also takes into account the behavior of the complete streamer array.” *See* PO Resp. 13 (citing Ex. 1001, 4:48–51). Furthermore, to the extent that Patent Owner is relying on the “global control system 22” as predicting or calculating such forces, the specification includes an alternative embodiment where the global control system does not calculate the forces, but alternatively, “can transmit location information to the local control system 36 instead of force information.” Ex. 1001, 6:38–39.

Accordingly, we determine based on the specification, claim language, and evidence from the complete record before us, that under the broadest reasonable interpretation, and giving the words their plain and ordinary meaning consistent with the specification, that the phrase “calculating desired changes in position” needs no construction and should be accorded its plain and ordinary meaning.

III. ANALYSIS

A. Claims 1 and 15 – Anticipation by Workman

To prevail on its patentability challenge, Petitioner must establish facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Petitioner asserts that claims 1 and 15 are anticipated by Workman under 35 U.S.C. § 102. Pet. 26–40; Pet. Reply 17–26. Patent Owner disagrees, and focuses its arguments on (a) distinguishing the claimed “predicting positions” limitation in claims 1 and 15 from the Kalman filter solution disclosed in Workman, and (b) that the positional correction disclosed by Workman does not fall within the broadest reasonable interpretation of “calculate desired changes.” PO Resp. 21–29.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsisimilis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

“[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of

IPR2014-00688

Patent 7,080,607 B2

the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.”

Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1371 (Fed. Cir. 2008).

Whether a patent is invalid as anticipated is a two-step inquiry. *See Power Mosfet Tech., LLC. v. Siemens AG*, 378 F.3d 1396, 1406 (Fed. Cir. 2004). The first step requires construction of the claims. *Id.* The second step in the analysis requires a comparison of the properly construed claim to the prior art. *Id.*

1. Overview of Workman

Workman discloses a method for controlling the position and shape of marine seismic streamer cables towed by a vessel. Ex. 1004, Abstract, Fig. 1. More specifically, Workman teaches that real time signals, i.e. actual signals, from a towed streamer array are compared to corresponding input threshold parameters, to determine if the cables should be repositioned. *Id.* at 2:47–51. Workman discloses that the positions of seismic streamer cables are controlled by a plurality of birds and tail buoys “for adjusting the vertical and lateral positions of the streamer cables 13.” *Id.* at 3:16–19. Figure 2 of Workman is reproduced below.

Fig. 2

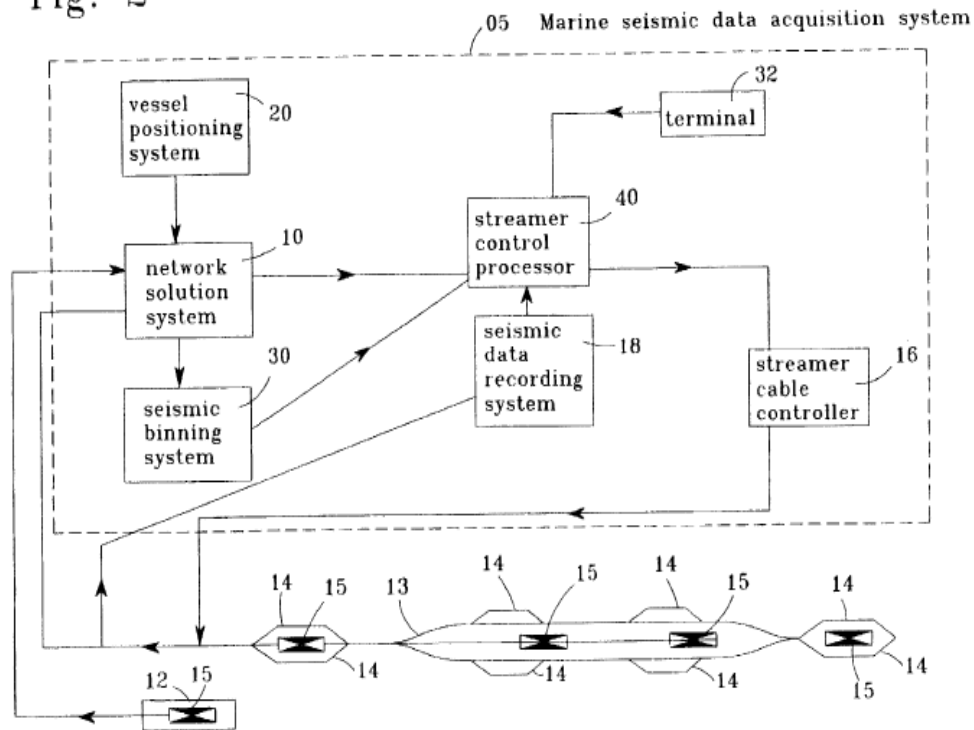


Figure 2 of Workman illustrates diagrammatically, seismic data acquisition system 5 for positioning streamer cables 13, including streamer controller 16 receiving instructions from streamer control processor 40. *Id.* at col. 4, ll. 16–18. Within data acquisition system 5, Workman also discloses network solution system 10 which uses a “Kalman filter solution on the signals it receives from the vessel positioning system 20 and location sensing devices 15.” *Id.* at col. 3, ll. 47–49. Workman states that once the real time position signals are obtained, “[t]he streamer control processor 40 evaluates these real time signals and the threshold parameters from the terminal 32 to determine when the streamer cables 13 need to be repositioned and to calculate the position correction required to keep the streamer cables 13 within the threshold parameters.” *Id.* at col. 4, ll. 12–17. Threshold values can be, for example, minimum streamer cable separations, minimum allowable seismic coverage, maximum hydrophone noise levels,

IPR2014-00688

Patent 7,080,607 B2

and minimum obstructive hazard separation. *Id.* at col. 3, l. 66–col. 4, l. 3. Besides repositioning of the streamer cables according to the comparison of real time signals and threshold parameters, Workman discusses an “at risk” situation such as entanglement of the streamer cables, or obstructive hazards. *Id.* at col. 4, ll. 45–51. In an “at risk” situation, certain parameters may be disregarded, for example, the hydrophone noise level parameter. *Id.* at col. 4, ll. 41–46. In other situations, the streamer cables may be repositioned due specifically to the level of hydrophone noise. *Id.* at col. 5, ll. 15–19.

2. Claims 1 and 15

Patent Owner argues that Workman does not anticipate claims 1 and 15 for essentially three reasons (1) Workman does not disclose “behavior prediction,” (2) Workman does not use the predicted position to calculate a change in position of the SPD, and (3) Workman does not enable a streamer positioning device that is suitable for lateral steering. PO Resp. 20.

Enablement

Patent Owner argues that Workman does not “enable one of ordinary skill in the art to practice the claimed *active control* of the ’607 patent without undue experimentation.” PO Resp. 33 (citing Ex. 2042 ¶¶160–162). We first address enablement because it is a threshold issue with respect to anticipation. A patent claim “cannot be anticipated by a prior art reference if the allegedly anticipatory [disclosure] cited as prior art [is] not enabled.” *In re NTP, Inc.*, 654 F.3d 1279, 1301 (Fed. Cir. 2011). Although anticipation is a question of fact, whether a prior art reference is enabling is a question of law with underlying factual inquiries. *Id.*

The standard for what constitutes proper enablement of a prior art reference for purposes of anticipation under section 102 differs from the

IPR2014-00688

Patent 7,080,607 B2

enablement standard for a patent application under section 112. *See Verizon Services Corp., v. Cox Fibernet Virginia, Inc.*, 602 F.3d 1325, 1337 (Fed. Cir. 2010). Anticipation does not require the actual creation or reduction to practice of the prior art subject matter; anticipation requires only an enabling disclosure. *See Schering Corp., v. Geneva Pharma, Inc.*, 339 F.3d 1373, 1380 (Fed. Cir. 2003); *citing In re Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985).

There is no dispute that streamer positioning devices which could be laterally or horizontally steered, were known in the prior art before the priority date of the '607 patent. The '607 patent itself describes “[a]nother system for controlling a horizontally steerable bird is disclosed in our published PCT International Application No. WO 98/28636.” Ex. 1001, 2:29–31. Further, discussing Figure 1 labeled “Prior Art” the '607 patent explains that “located between the deflector 16 and the tail buoy 20 are a plurality of streamer positioning devices known as birds 18. Preferably the birds 18 are both vertically and horizontally steerable.” *Id.* at 3:47–50. *See Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1379 (Fed. Cir. 2001). “It is well settled that “enablement of an anticipatory reference may be demonstrated by a later reference.”)

Workman refers in the Background of the Invention to SPD's which control lateral position of streamers, “streamer positioning devices are well known in the art . . . For example, devices to control the lateral positioning of streamer cables by using camber-adjustable hydrofoils or angled wings are disclosed in U.S. Pat. Nos. 4,033,278 and 5,443,027. Ex. 1004, 1:45–48. Moreover, it is presumed that Workman is enabled. *See Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F. 3d 1313, 1355 (Fed. Cir. 2003) (“an accused infringer should be [] entitled to have the district court presume the

IPR2014-00688

Patent 7,080,607 B2

enablement of unclaimed (and claimed) material in a prior art patent defendant asserts against a plaintiff.”).

We are persuaded on the record before us that at least Workman and the '636 PCT sufficiently describe lateral steering such that one of ordinary skill in the art would be able to practice lateral steering of SPD's. Further, we note that neither claim 1 nor 15 recites specifically a limitation that the streamer positioning devices are laterally steered. In fact, Patent Owner does not attempt to distinguish its invention over Workman on the basis of “lateral steering.” As noted above, Patent Owner argues that Workman does not “enable one of ordinary skill in the art to practice the claimed *active control* of the '607 patent without undue experimentation.” PO Resp. 33 (citing Ex. 2042 ¶¶160–162). These arguments of non-enablement by Patent Owner are overall vague, at best, as to what actually in the claimed invention is non-enabled, since neither do the claims recite the term “active control.” According to Patent Owner, Workman apparently does not enable paragraphs (b) and (c) of independent claims 1 and 15 which recite the limitations of “predict[ing] positions” and “calculating changes in positions” i.e. “active control” of the SPD's. *See Id.* at 30.

As discussed above, we interpret “predicting positions” to mean “estimating the actual locations,” and give the term “calculating changes in positions” its plain and ordinary meaning. Apart from attacking the references themselves which is not persuasive, Patent Owner relies mainly upon Dr. Triantafyllou's testimony to support the position that “lateral steering of streamer positioning devices along the length of a seismic streamer was not a trivial problem as of 1998.” *Id.* at 33–34 (citing Ex. 2042 ¶ 164). Dr. Triantafyllou's testimony does not, however, assert that one of skill in the art could not have practiced or would have had to undertake

IPR2014-00688

Patent 7,080,607 B2

undue experimentation to predict positions, achieve lateral steering or provide active control of an SPD. Dr. Triantafyllou states that “as of 1998, lateral steering of seismic streamers along their length was not a trivial problem. At that time, no one had a working commercial lateral streamer steering system.” Ex. 2042 ¶ 164. The fact that lateral steering, or active control, for that matter was “not a trivial problem” or that at the time it may have been more rudimentary, or that there was no commercial lateral steering “system,” does not explain with sufficient specificity that it had not been accomplished prior to the ’607 patent. Nor does it explain sufficiently why one of skill in the art could not have practiced lateral and depth-wise steering of an SPD according to calculated desired changes in position based on an estimated actual position of the SPD using for example, a Kalman filter. The enablement requirement seeks to assure that a person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

For enablement there are two distinct burdens of proof, Petitioner’s burden of persuasion, which never shifts, and the burden of production that shifted in this case to Patent Owner. *Dynamic Drinkware, LLC v. National Graphics, Inc.*, – F.3d –, 2015 WL 5166366, *2 (Fed.Cir. Sept. 4, 2015) (“[t]he burden of production then shifted to National Graphics [Patent Owner] to argue or produce evidence . . . that Raymond is not prior art”). We determine that Patent Owner has not met its burden of production, i.e. sufficient arguments or evidence which overcome the presumption that Workman is enabled as to lateral steering and active control of SPD’s.

Behavior Prediction

With respect to behavior-predictive modeling, as discussed above in Section II.B we do not read into the claim language the requirement that

“predict[ing] positions” as recited in each of claim 1 and claim 15 requires behavior-predictive modeling. Thus, Patent Owner’s arguments in this regard are not persuasive because neither claim 1 nor claim 15 requires “behavior-predictive modeling.”

Predicting Positions

Patent Owner next contends that Workman does not predict the position of an SPD based on the time delay that is inherent in the “predict[ing] positions” limitation recited in claims 1 and 15. Patent Owner also argues specifically that Workman only discloses using a Kalman filter “to determine the real time position of the **seismic sources** and **seismic streamer cables**,” and not an SPD itself. PO Resp. 21 (citing Ex. 1004, 2:15–19 (emphasis added by Patent Owner)). Also, Patent Owner contends, Workman is only concerned with adjusting the SPD’s “**after** the actual or real time position of the streamer falls outside the threshold value.” *Id.* at 22 (citing Ex. 1004, 4:22–46).

As discussed above in Section II.B we have incorporated the time delay aspect of past verses future positions of the SPD’s into the proper claim construction of “predicting positions” by determining this limitation to mean “estimating the *actual* locations.” Patent Owner’s argument resolves into essentially the question of whether Workman discloses a Kalman filter to “estimate the actual locations” of streamer positioning devices. We divide this question into two parts, first to resolve the issue of whether Workman’s Kalman filter is *estimating* the actual locations, and second to determine if an *actual location* of an SPD is being estimated. Workman itself states that

[t]ypically, the network solution system 10 implements a Kalman filter solution on the signals it receives from the vessel

positioning system 20 and location sensing devices 15. The network solution 10 outputs *real time* streamer cable shapes, streamer cable positions, and streamer cable separations.”

Ex. 1004, 3:46–51 (emphasis added). Dr. Evans testifies that “Kalman filters were well-known in the art to be useful to make predictions or estimates of real-time information (including location information), and such filters use previously collected data, as well as current data, to make these predictions.” Ex. 1002 ¶ 114. Patent Owner contends to the contrary that Workman “does not explain when the system would or would not use a Kalman filter, which signals or measurements would go into the Kalman filter, what methodology the Kalman filter would employ, or what the output of the filter would be.” PO Resp. 23–24 (citing Ex. 2042 ¶¶ 141–142). Patent Owner’s Declarant Dr. Triantafyllou states that a Kalman filter, as a filter for noisy signals, may just provide “an optimal estimate of the true (nonnoisy) state of the system” but admits, that it can also “predict the behavior of the system in the future.” Ex. 2042 ¶ 137. Patent Owner’s position is essentially that, merely because Workman discloses a Kalman filter, it is not necessarily undertaking the predicting function as recited in the claims at issue. PO Resp. 24.

This argument is not persuasive because Workman clearly describes that the Kalman filter would first receive signals including vessel positioning and location sensing device signals, i.e. position and location signals, and that the network solution 10 would make use of such signals to determine “real time . . . streamer cable positions.” Ex. 1004, 3:46–51, *see also* Ex. 1092, 434. We further understand the term “real time” cable positions to mean a cable position as a function of time and signal processing delay time, and that is most reasonably understood in context as current, actual, or some

future estimated time relative to when the data i.e. old data, used to compute the “real time” cable position was observed. Thus, we interpret Workman to disclose a Kalman filter that provides an estimate of real time, i.e. actual, streamer positions based on previously observed location data, an interpretation that falls squarely within an “estimate of an actual position” as determined in our claim construction for the “predict[ing] positions” limitation in claims 1 and 15.

We agree with Patent Owner that Workman’s written description does not specifically state that the location sensing device 15 observes the streamer positioning device itself, but describes more generally “observing the position of the streamer cables 13 and seismic sources 12.” PO Resp. 24–25, Ex. 1004, 3:22–24. Workman’s Figure 1, reproduced below, illustrates a seismic survey system 01 having an array of streamers 13 towed by a vessel 11.

Fig. 1

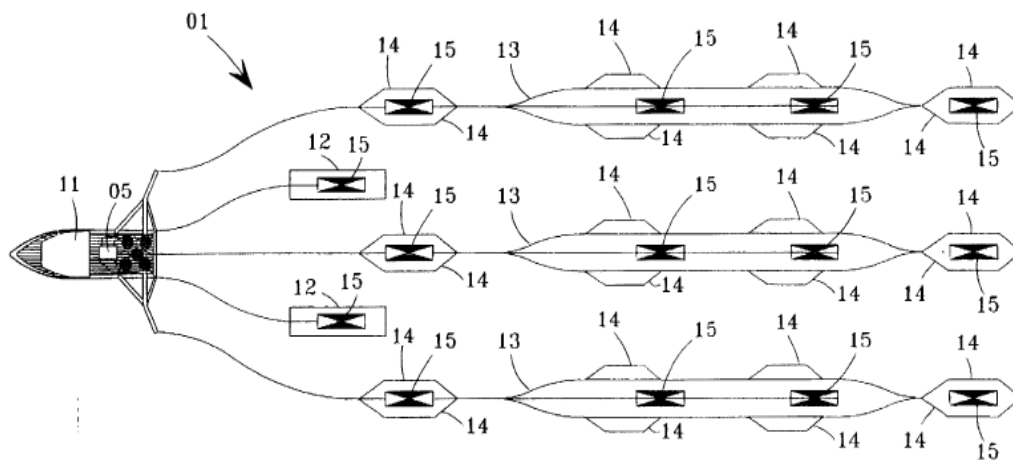


Figure 1 of Workman, above, depicts each streamer 13 having a plurality of streamer positioning devices 14 i.e., birds. *Id.* at 3:14–18. However, along

with each streamer positioning device 14 in Figure 1, also is depicted a location sensing device 15. Dr. Evans, Petitioner's Declarant states that:

estimates of "streamer cable positions" would be understood by a person of ordinary skill as predictions of the locations of streamer positioning devices attached to the cables, because Kalman filters are understood as functioning to compute "[t]he position of any point of interest throughout the spread" Ex. 1006 (Gikas) at 24; *see supra* ¶ 72. Predictions of the cable shapes and positions using a Kalman filter subsume predictions of the streamer positioning devices along that cable.

Ex. 1002 ¶ 118. It is essentially undisputed that each location sensing device 15 is located with, i.e. associated with, a positioning device 14 and that the streamer position at the streamer positioning device 15 is being determined. Dr. Triantafyllou testified to this understanding of Workman's streamers and streamer positioning devices:

8 Q And 14 are the streamer positioning

9 devices, right?

10 **A Correct.**

11 Q So that the location sensors, 15, are

12 associated with the streamer positioning devices, 14?

13 **A That's how it's shown.**

Ex. 1091, 414. If the position of the streamer is being determined at the location of a streamer positioning device, it simply follows that the position of the streamer positioning device 14 is also determined. It is not necessary that Workman explicitly state that the location of the SPD itself is being determined. We find, on the complete record before us, that by determining the positions of streamer cables and associated positioning devices, this discloses to a person of ordinary skill in the art that Workman functions in accordance with the limitation of "predict[ing] positions of at least some of

the streamer positioning devices” as called for in claims 1 and 15. *See* Ex. 1004, 3:15–29, Figs. 1, 2.

calculate desired changes

We determined above that “calculate desired changes” should be accorded its plain and ordinary meaning. Patent Owner argues that the disclosed positional correction in Workman “does not take into account the behavior of each streamer and the behavior of the complete streamer array.” PO Resp. 28. As discussed above, we do not construe any aspect of the claim language to incorporate a behavioral aspect of either a streamer or the entire streamer array, as Patent Owner’s proposed claim construction, and this related argument suggest. *Id.* at 28–29 (citing Ex. 2042 ¶¶ 147–148).

Explaining how its streamer control processor 40 works, Workman states

[t]he streamer control processor 40 evaluates these real time signals and the threshold parameters from the terminal 32 to determine when the streamer cables 13 need to be repositioned and to calculate the position correction required to keep the streamer cables 13 within the threshold parameters . . . When the streamer cables 13 need to be repositioned, the position correction is used by the streamer device controller 16 to adjust the streamer positioning devices 14 and reposition the streamer cables 13.

Ex. 1004, 4:13–22. Thus, it is clear that if certain threshold parameters are exceeded, a position correction is applied by the streamer positioning devices 14 to the streamer. *Id.* at 3:62– 4:8, Fig. 3. Patent Owner argues that the recited calculations are different from Workman’s threshold parameters. PO Resp. 28. Whether or not Workman also discloses a “threshold requirement” that determines when, or within what predetermined constraints, a position correction is applied, is not material to this analysis.

Neither the claims, nor the phrase “calculate desired changes” require the absence of threshold requirements. In other words, under the broadest reasonable interpretation, the plain meaning of the phrase, “calculate desired changes,” as recited in each of claims 1 and 15, is simply “to calculate desired changes in position,” regardless of other functions or calculations, such as those pertaining to threshold criteria, that may, or may not, be disclosed in the prior art. As distinctly expressed by Workman’s written description, above, the streamer control processor “calculate[s] the position correction” which are “used by the streamer device controller 16 to adjust the streamer positioning devices 14.” Ex. 1004, 4:13–22. Also, we are similarly not apprised of any difference from Workman because such threshold parameters are manually input to the processor 40. PO Resp. 29. We are not “reading out” a limitation here as Patent Owner contends, but in fact are not reading an inappropriate claim limitation into the clear and unambiguous meaning of “calculate desired changes.” *Id.*

Based on the evidence in this case Workman expressly teaches calculating position correction of SPD’s that is no different than the limitation “to calculate desired changes in position of one or more of the streamer positioning devices” recited in each of claims 1 and 15.

We are persuaded by the complete record before us that Petitioner has shown by a preponderance of the evidence that each of the limitations of independent claims 1 and 15 are disclosed by Workman.

B. Claims 1 and 15 – Obviousness over Workman

Patent Owner contends that our Decision to Institute did not provide legally sufficient obviousness analysis and “fails to apprise Patent Owner of the specific ground of unpatentability that is the basis for this trial.” PO Resp. 34 (*citing In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001), *In re*

IPR2014-00688

Patent 7,080,607 B2

Vaidyanathan, 381 Fed. App'x. 985, 994 (Fed. Cir. 2010), and *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009)).

Specifically, Patent Owner argues that “[t]he obviousness case is now a moving target, with Patent Owner left guessing as to what features the Board considers missing from the ’636 PCT, but that would be obvious in view of the level of ordinary skill in the art.” *Id.* at 35.

It is well settled that novelty under 35 U.S.C. § 102 and nonobviousness under 35 U.S.C. § 103 are separate conditions of patentability. *See Cohesive Tech., Inc. v. Waters Corp.*, 543 F.3d 1351, 1363 (Fed. Cir. 2008). “[I]t does not follow that every technically anticipated invention would also have been obvious.” *In re Fracalossi*, 681 F.2d 792, 796 (CCPA 1982) (Miller, J., concurring).

The tests for anticipation and obviousness are different. *Cohesive*, 543 F.3d at 1364. Obviousness generally requires an analysis under the *Graham* factors. *Id.* In the instant case, however, we agree with Petitioner that Workman, as a standalone reference discloses all of the limitations of claims 1 and 15 including “predict[ing] positions” and “to calculate desired changes” as construed and discussed above. In other words, there is no element of claims 1 and 15 missing from Workman as discussed above in relation to anticipation that necessitates modification, additional rationale, or articulated reasoning. Inasmuch as Workman is relied upon as the sole reference for both anticipation and obviousness grounds and is directed to the same field of endeavor seeking to solve the same, or similar problem of controlling birds, i.e. SPD’s, in a towed seismic survey array as in the ’607 patent, including “receiving a plurality of real time signals . . . calculating a position correction that will keep the streamer cables within the threshold parameters; and sending the position correction to a streamer device

IPR2014-00688

Patent 7,080,607 B2

controller for adjusting a plurality of streamer positioning devices.” (Ex. 1004, 5:36–59), this case is particularly appropriate for application of the maxim that anticipation is the epitome of obviousness. *Fracalossi*, 681 F.2d at 794. All that remains for this ground is to address secondary considerations, which we do below.

C. Claims 1 and 15 – Obviousness over Workman and Elholm

Petitioner asserts that claims 1 and 15 would have been obvious over Workman and Elholm. A patent is invalid for obviousness:

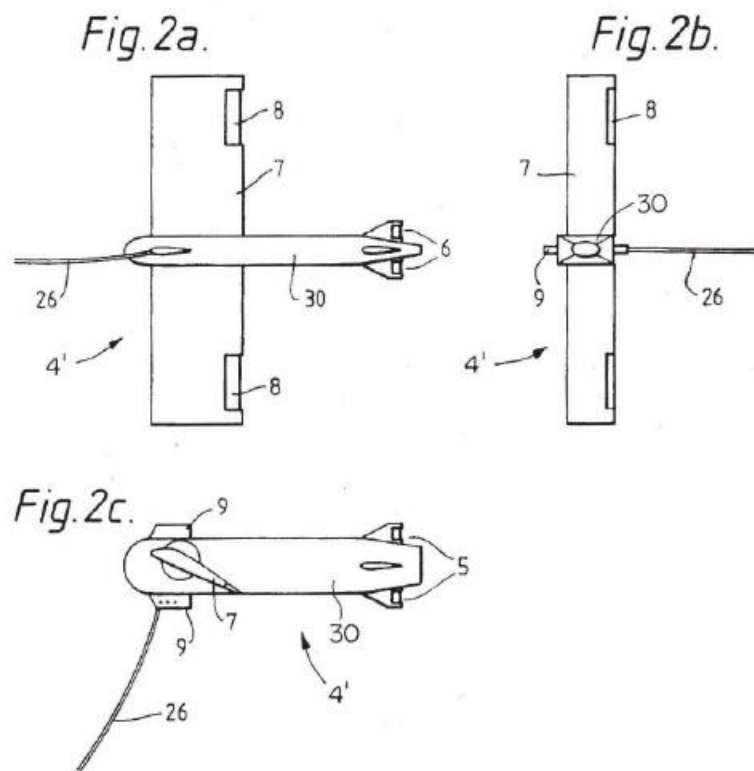
if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103. Obviousness is a question of law based on underlying factual findings: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of nonobviousness. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). Courts must consider all four *Graham* factors prior to reaching a conclusion regarding obviousness. *See Eurand, Inc. v. Mylan Pharms., Inc. (In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.)*, 676 F.3d 1063, 1076–77 (Fed. Cir. 2012). As the party challenging the patentability of the claims at issue, Petitioner bears the burden of proving obviousness by a preponderance of the evidence. *See* 35 U.S.C. § 316(e).

1. Overview of Elholm

Elholm discloses a streamer positioning device used in marine seismic surveying that is specifically referred to as a “vessel.” Ex. 1005, col. 3, ll. 1–21. The vessel contains position and location determining components

such as a compass, inclinometer, and pressure transmitters, ballast and buoyancy tanks as well as acoustic positioning equipment including, “hydrophones and transducers which transmit and receive sound in such a manner that it is possible to calculate the distance between the units in the towing system.” *Id.* Figures 2a–c of Elholm, reproduced below, illustrate vessel 4’ including controllable steering wings 7, balance rudder 8, and tail rudder 6, for controlling the position of the vessel as it is being towed.



As depicted by Figures 2a–c of Elholm, vessel 4’ is connected to a marine survey ship (not shown) by connection cable 26. *Id.* at col. 4, ll. 24–26. Elholm also discloses a survey system including a computer program which receives the position and location data from the vessel, and then determines specific control signals, which are transmitted to the vessel, causing the vessel’s steering components to adjust the position of the vessel, to ensure it is in the “optimum position.” *Id.* at col. 3, ll. 32–41. Alternatively,

IPR2014-00688

Patent 7,080,607 B2

Elholm's vessel can be controlled by an internal (to the vessel) position control loop, based on the data from "positioning instruments and other instruments installed in the vessel (4') in order to provide as accurate positioning as possible." *Id.* at col. 5, ll. 35–42.

2. *Level of Ordinary Skill*

Petitioner's Declarant, Dr. Evans states that a person of ordinary skill in the art of marine seismic surveying should have for example a Master's degree or Ph.D. in ocean engineering, mechanical engineering, geophysics, or a related area, an understanding of hydrodynamics and advanced control systems, and at least three years of experience designing and operating marine seismic surveys, including significant field experience aboard marine vessels undertaking marine seismic surveys. Ex. 1002 ¶ 23. According to Dr. Triantafyllou, Patent Owner's expert, one of ordinary skill in the art would have a "Bachelor of Science in ocean engineering or control systems; or five years of experience in the field of ocean engineering or marine seismic surveys." Ex. 2042 ¶ 18.

There is no specific dispute regarding the level of ordinary skill in the art between the parties although Petitioner's definition essentially involves greater educational component and specific field experience on a survey vessel. Notwithstanding the evidence on skill level presented by the parties, the level of skill in the art often can be determined from a review of the prior art. *See Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163–64 (Fed. Cir. 1985). Based on our review of the prior art and the parties definitions, the applicable field of endeavor is marine seismic surveying, and the person of ordinary skill in the art would have at least a bachelor's degree in ocean, mechanical, geophysical or electrical engineering, or a similar science degree, and a minimum of 3 years of marine seismic survey design

and field experience. Ex. 2042 ¶ 18, Ex. 1002 ¶ 23. The person of ordinary skill in the art would also be familiar with the design and operation of marine seismic surveys including the design of seismic survey arrays including sensors such as hydrophones, streamers, streamer positioning devices and the associated electronic equipment for producing representations of sub-surface geology. Ex. 1005, 1:5–35, Ex. 1004, 1:10–61.

3. Claims 1 and 15

Petitioner contends that to the extent that Workman does not disclose explicitly the step of “predict[ing] positions of at least some of the *streamer positioning devices*” because Workman initially refers only to predicting positions of the streamers, Elholm teaches specifically observing and adjusting the position of streamer positioning device. Pet. 42–44 (citing Ex. 1005 3:37–41. Petitioner argues that Elholm uses a “computer programme” which performs calculations based on data from a streamer positioning device, i.e. vessel, itself that moves the streamer positioning device into an “optimum position.” *Id.* at 43 (citing Ex. 1005, 3:40). Petitioner reasons that one of ordinary skill in the art would have been motivated to modify Workman’s predictive control system to control the positions of streamer positioning devices, rather than just the streamers “because the streamer positioning devices perform the actual adjustments, so that streamer steering is best accomplished by locating and adjusting their positions and, by extension, the streamers to which they are attached.” *Id.* at 44 (citing Ex. 1002 ¶ 136).

Petitioner supports its position with Dr. Evans testimony that “ascertaining the position of the streamer positioning devices” had been known in the field of marine seismic surveys for decades. Ex. 1002 ¶ 136

IPR2014-00688

Patent 7,080,607 B2

(citing *id.* at 66–77). Dr. Evans testifies that “the prior art has long recognized that positions determined in the past can be used, along with other inputs such as the vessel’s velocity and heading, to predict present positions.) *Id.* at 71. To back up his testimony that time delay and “prediction” of marine seismic array positioning systems was well known, Dr. Evans relies further on a 1995 Hydrographic Journal article, Vassilis Gikas et al., *A Rigorous and Integrated Approach to Hydrophone and Source Positioning during Multi-Streamer Offshore Seismic Exploration*, 77 Hydrographic J. 11 (1995)), (“Gikas” Ex. 1006). Comparing a “least squares” filtering technique to Kalman filtering, Gikas explains that “[o]ften, and especially in seismic work, it is possible to make a very accurate prediction of where the network will be at any epoch using just the previous position and the estimated configuration motion.” Ex. 1006, 12:1.1.1.

Patent Owner disagrees with Petitioner’s assertions of obviousness and motivation, arguing that Elholm’s vessel is very different from the streamer positioning devices taught in the ’607 patent as Elholm’s vessel is positioned at the front of the array and “would give no indication of how the streamer is behaving miles down the length of the streamer. PO Resp. 41 citing (Ex. 2042 ¶¶ 153, 170). Additionally, Patent Owner alleges that Elholm does not recognize the issues with time lag or delay between the prior observed or measured position of the vessel and actual position of the vessel, and therefore would not “predict” the positions of the streamer devices, nor use such “predicted” positions to calculate desired changes in position. *Id.* Patent Owner argues that because neither Workman or Elholm recognized the issue of a delay between measured and actual position “there would be no motivation to combine the reference for that purpose. Instead, the combined system of Workman and Elholm would comprise nothing

more than an array of streamers with a controllable paravane.” PO Resp. 42 (citing Ex. 2042 ¶ 170.) In support, Dr. Triantafyllou testifies that Elholm does not disclose the use of multiple vessels along the length of the streamer, but only a single vessel at the front of the array that “would not give any indication of how the streamer is behaving miles down the length of the streamer. Ex. 2042 ¶ 153, 170.

Despite Patent Owner’s arguments, we agree with Petitioner’s analysis as supported by Dr. Evans testimony, that one of ordinary skill in the art would have had reason to combine the teachings of Workman and Elholm to achieve the invention recited in challenged claims 1 and 15 with a reasonable expectation of success. Workman teaches every aspect of the claimed invention including towing an array of streamers, each streamer having a plurality of streamer positioning devices, predicting the positions of at least the streamers (if not the streamer positioning devices) and calculating changes in position of the streamer so as to control a streamer positioning device to affect the streamers. Based on Dr. Evans testimony, we are persuaded that one of skill in the art would have been motivated to modify Workman, by measuring, observing and changing the position of an SPD itself (as opposed to merely the streamer) as taught by Elholm, in order to accurately and precisely control the streamer. We agree that a person of ordinary skill in the art would have looked to Elholm’s teaching of an observable and controllable SPD via a “computer programme,” as a compatible streamer positioning device providing more accurate positional control of a streamer along its length, in the manner of Workman’s streamer control processor as it controls an array of streamers via multiple SPD’s on each streamer.

We are not persuaded by Patent Owner's position that Elholm only discloses a single SPD at the front of a streamer array because Petitioner is relying on Elholm for its teaching of an observable and controllable SPD, whereas it is Workman that teaches multiple SPD's along the length of each streamer. *See KSR*, 550 U.S. at 420 (“[F]amiliar items may have obvious uses beyond their primary purpose, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.”). Additionally, Patent Owner is arguing the references individually and these arguments fail to consider the collective teachings of Workman and Elholm from the perspective of one of ordinary skill in the art. *See PO Resp.* 40–43. Nonobviousness cannot be established by attacking the references individually when a challenge is predicated upon a combination of prior art disclosures. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). In attacking Elholm individually, Patent Owner fails to address Petitioner's actual challenges or, therefore, establish an insufficiency in the combined teachings of the references.

Accordingly, we conclude Petitioner has established by a preponderance of evidence that claims 1 and 15 would have been obvious under 35 U.S.C. § 103 in view of the disclosures of Workman and Elholm.

D. Testimony of Dr. Evans and Dr. Cole

Patent Owner promulgates numerous arguments as to why we should disregard Dr. Evans and Dr. Cole's testimony in this proceeding. *PO Resp.* 43–45. We do not rely in our Decision upon Dr. Cole's testimony, and address Patent Owner's arguments with respect to Dr. Evans, below.

Dr. Evans has an undergraduate Electrical Engineering Degree, a Masters in Applied Physics, a Ph.D in Geophysics, and is a Professor of Geophysics in the Department of Petroleum Engineering at Curtin

IPR2014-00688

Patent 7,080,607 B2

University in Bentley, Western Australia. Ex. 1002 ¶ 4, 10. Dr. Evans has over 40 years of marine seismic survey experience including designing dozens of seismic surveys and personally participated on board seismic survey vessels in over one hundred seismic surveys. *Id.* ¶ 5. Dr. Evans is also the author of, A HANDBOOK FOR SEISMIC DATA ACQUISITION IN EXPLORATION, published by the Society of Exploration Geophysicists. *Id.* Dr. Evans' experience and testimony demonstrates at least a level of ordinary skill in the art of marine seismic survey and data acquisition.

Patent Owner argues that Dr. Evans did not undertake his claim construction analysis under the proper broadest reasonable interpretation standard, because he apparently referred during his deposition to his own "personal experience" and other "disclosures" he considered as part of his interpretation. PO Resp. 43 (citing Ex. 2040 at 251:14 – 252:15). This argument is not persuasive. First, Dr. Evans explicitly stated that he considered the specification and claim language in the '607 patent in determining his claim construction under the BRI standard. Ex. 2040 at 251:17 –20. Second, Dr. Evans is at least a person of ordinary skill in the art, and his personal experience as one of skill in the field of marine seismic surveying is something that may certainly be considered in the assertion of his claim interpretation. Third, Patent Owner has failed to provide any substantive legal basis to support the apparent position that other disclosures, apart from the specification, cannot be used to determine a claim construction under the BRI standard. For example the prior art may be "indicative of what all those skilled in the art generally believe a certain term means ... [and] can often help to demonstrate how a disputed term is used by those skilled in the art." *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir.

IPR2014-00688

Patent 7,080,607 B2

1999) (quoting *Vitrionics Corp. v. Conceptronic, Inc.*, 90F.3d 1576, 1584 (Fed. Cir. 1996)).

We are also not persuaded that Dr. Evans' discussion of the difficulties in obtaining accurate marine seismic data in the introduction to chapter 5 in his book, *A HANDBOOK FOR SEISMIC DATA ACQUISITION IN EXPLORATION*, is in contradistinction to his current testimony or is any particular statement as to the state of the art in 1997 when his book was published. Ex. 2068. In the context of his book, Dr. Evans is contrasting the difficulties of obtaining seismic data surveys in a marine environment due to "wind, currents and wave action" with that of a land-based survey environment. *Id.* Indeed, the passages from Dr. Evans book generally describing the difficulties in land and marine seismic surveying, can be understood fairly as consistent with the teachings of the '607 patent. For example, the Background of the Invention in the '607 patent describes that due to the difficulties in obtaining accurate data, "[i]t is estimated that horizontal out-of-position conditions reduce the efficiency of current 3D seismic survey operations by between 5 and 10%, depending on weather and current conditions." Ex. 1001, 2:5–8.

Finally, we are not persuaded that Dr. Evan's apparent admission that Figures 1 and 2 of Workman's drawings are not "to scale" is at all relevant to the co-location issue of the streamer positioning devices 14 and location sensing devices 15. PO Resp. 45. Dr. Evans explained in the relevant deposition testimony that the length of the streamers, being in reality many kilometers in length and the width of the streamers relative to the boat towing the array of streamers, was not drawn to scale. Ex. 2039, 147:6–21. Moreover, Patent Owner does not explain or provide any evidence demonstrating that a properly scaled drawing would not also indicate the co-

location of Workman's streamer positioning devices 14 and location sensing devices 15. We are not persuaded by these contentions that Dr. Evan's testimony should be disregarded.

E. Secondary Considerations

Patent Owner has proffered certain evidence of secondary considerations applicable to both obviousness grounds, which we address here. PO Resp. 47–49. The factual inquiries for obviousness include secondary considerations based on evaluation and crediting of objective evidence. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). However, to accord substantial weight to objective evidence requires the finding of a nexus between the evidence and the merits of the claimed invention. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995); *see also In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (“success is relevant in the obviousness context only if there is proof that the sales were a direct result of the unique characteristics of the claimed invention.”).

Patent Owner contends that certain evidence from the ION lawsuit and from the Declaration of Robin Walker, (Ex. 2077), Patent Owner's former Vice President of Sales and Marketing Director, establishes a long-felt need and commercial success of the patented inventions. PO Resp. 48–49. Specifically, Patent Owner argues that “the record evidence during the ION litigation established the long-felt need and commercial success of the patented inventions, as well as initial industry skepticism followed by praise once the inventions were commercialized.” *Id.* at 48. In support of this argument, Patent Owner refers to a variety of trial testimony exhibits from the ION lawsuit, including those of Mr. Walker (Ex. 2034), Mr. Tom Scoulios (Ex. 2035), and Mr. Robert Brune (Ex. 2036). *Id.* With respect to the trial testimony of Messrs. Walker, Brune and Scoulios, Patent Owner

IPR2014-00688

Patent 7,080,607 B2

merely provides citations to purportedly relevant portions of Exhibits 2034, 2035, 2036, stating only

(See, e.g. Ex. 2034, Excerpt of Trial Testimony of Robin Walker, at 1623:2-18 (evidencing commercial success of 4D survey systems); Ex. 2035, Excerpt of Trial Testimony of Tom Scoulios, at 290:4-291:16 and 293:10-18 (evidencing long-felt need for lateral steering system and failure of others to solve the problem with tail buoy systems); Ex. 2036, Excerpt of Trial Testimony of Robert Brune, at 3997:19-3999:7 (evidencing long-felt need for the claimed system, failure of others to solve the problem solved by the claimed system, and industry praise for the claimed system).)

Id. Patent Owner argues that these references to trial testimony from district court litigation support a finding of long-felt need but does not explain with any detail why, or how, the referenced testimony, evidences a long-felt need, failure of others, or industry praise. In this regard, we limit our review to evidence actually discussed in Patent Owner's Response. We will not play archeologist with the record to discover evidentiary support for bare attorney argument made in such a response. *See Google Inc. v. ART+COM Innovationpool GmbH*, Case IPR2015-00788, slip. op. at 10 (PTAB Sept. 2, 2015) (Paper 7) (citing 37 C.F.R. § 42.104(b)(5) ("The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge.")). We decline to consider, moreover, information presented in an Exhibit, but not discussed sufficiently in Patent Owner's Response. *See* PO Resp. 48 (citing Ex. 2035 and 2036, without any discussion of that evidence). Among other reasons, doing so would permit the use of declarations to circumvent our rules relating to page limits. In that regard, our rules prohibit a party from incorporating by reference from one

IPR2014-00688

Patent 7,080,607 B2

document (such as a supporting declaration) into another document (such as Patent Owner's Response). *See* 37 C.F.R. § 42.6(a)(3).

Patent Owner argues that the Declaration of Robin Walker is firsthand evidence of industry praise “and how WesternGeco’s revolutionary lateral steering technology satisfied a long-felt need in the industry (Ex. 2077, ¶¶ 12–37) and ultimately contributed to billions of dollars in revenue (Ex. 2077, ¶¶ 47–51).” PO Resp. 48–49. Patent Owner, however, does not explain adequately how the Q-Marine product allegedly embodies the challenged claims in the ’607 patent. Mr. Walker states specifically that

[t]hrough its provision of WesternGeco’s patented lateral steering technology, Q-Marine satisfied a significant, previously unmet need in the industry for better quality data and more cost-effective surveys by offering numerous benefits, including those detailed below.

Ex. 2077 ¶ 12. The benefits described in the subsequent paragraphs of Mr. Walker’s Declaration are apparently based on lateral steering technology, with the result that “better data quality could be achieved without the risk of costly downtime and damage due to streamer tangling.” *Id.* at ¶ 15. It may be that Q-Marine provides a better, faster, more reliable and commercially successful 4D survey, but any commercial success enjoyed by the Q-Marine product is relevant only if the challenged claims are shown to embody those products. Patent Owner has not made out that critical showing. *See In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008) (finding no nexus, absent evidence that “the driving force behind [the allegedly successful product’s sales] was the claimed combination”) (emphasis added); *Ormco Corp. v. Align Technology Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006) (requiring a “nexus between the claimed invention and the commercial success”); *Huang*, 100 F.3d at 140 (requiring proof that sales were a “direct result of

IPR2014-00688

Patent 7,080,607 B2

the unique characteristics of the claimed invention”). In the alternative, Patent Owner’s evidence of commercial success does not outweigh the strong showing of obviousness made out by Petitioner in view of anticipation by Workman, and also Workman and Elholm. *See Sud-Chemie, Inc. v. Multisorb Techs., Inc.*, 554 F.3d 1001, 1009 (Fed. Cir. 2009) (“evidence of unexpected results and other secondary considerations will not necessarily overcome a strong prima facie showing of obviousness”). Accordingly, the alleged commercial success of the Q-Marine product does not support a conclusion of nonobviousness of the challenged claims in this case.

F. Time Bar under 35 U.S.C. § 315(b)

Patent Owner makes several arguments in support of its position that the PGS IPR is time-barred under 35 U.S.C. § 315(b). We address each of Patent Owner’s arguments below. PO Resp. 50–60.

1. Whether ION is an Unnamed RPI

The statute governing *inter partes* review proceedings sets forth certain requirements for a petition for inter partes review, including that “the petition identif[y] *all* real parties in interest.” 35 U.S.C. § 312(a) (emphasis added); *see also* 37 C.F.R. § 42.8(b)(1) (requirement to identify real parties in interest in mandatory notices). The Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764 (Aug. 14, 2012) (“Practice Guide”) explains that “[w]hether a party who is not a named participant in a given proceeding nonetheless constitutes a ‘real party-in-interest’ . . . to that proceeding is a highly fact-dependent question.” 77 Fed. Reg. at 48,759. The Practice Guide further states that: However, the spirit of that formulation as to IPR and PGR proceedings means that, at a general level, the “real party-in-interest” is the party that desires review of the patent. Thus, the “real party-

IPR2014-00688

Patent 7,080,607 B2

in-interest” may be the petitioner itself, and/or it may be the party or parties at whose behest the petition has been filed. *Id.* (emphasis added). The determination of whether a party is an RPI is a “highly fact-dependent question” (*id.*), in which the focus is on the party’s relationship to the inter partes review pending before the Board, and the degree of control the party can exert over the proceeding. *See Aruze Gaming Macau, Ltd. v. MGT Gaming, Inc.*, Case IPR2014-01288, slip op. at 11 (PTAB Feb. 20, 2015) (Paper 13). “[I]f a nonparty can influence a petitioner’s actions in a proceeding before the Board, to the degree that would be expected from a formal co-petitioner, that nonparty should be considered an RPI to the proceeding.” *Id.* at 12.

Patent Owner asserts in its Response that ION is a real party-in-interest under the factors set forth in our Practice Guidelines because (a) Petitioner invoked ION’s indemnity obligations by notifying ION that Petitioner expected ION to fulfill its obligations and pay for the lawsuit and this IPR proceeding; (b) ION was obligated to pay for this IPR and was instrumental in developing invalidity theories, thus giving ION an “interest, opportunity to control, and active control over the Petition;” and (c) Petitioner is ION’s proxy due to ION’s obligation under the indemnification agreement. PO Resp. 54– 55.

Patent Owner’s main contention for indemnification, and thus control by ION, focuses on an indemnification provision in the 2008 Master Purchase Agreement (“Agreement” Ex. 2069) between PGSAS and Concept Systems Limited (“Concept”), an ION subsidiary. *Id.* at 50. The Agreement is considered protective order material in this proceeding. *See* Ex. 2069.

Patent Owner argues that the indemnification provision “reasonably includes defending against an infringement lawsuit, proving the invalidity of

IPR2014-00688

Patent 7,080,607 B2

a patent in a review proceeding, and obtaining a license.” PO Resp. 50.

Patent Owner contends that Petitioner invoked this indemnification in its letter of November 13, 2012 to ION citing the above indemnification provision and stating “[i]f it turns out that ION or its affiliates did not have the proper patent licenses for the DigiFIN equipment and related components and services it sold us, we expect that ION will provide us with appropriate remedies.” Ex. 2027. Patent Owner concludes that “ION thus has control, or at least the opportunity to control, the selection and implementation of a remedy that includes filing a petition for review.” PO Resp. 51–52.

As an initial matter, nowhere in the asserted provision of the Agreement does it state that Concept (ION) has the right, or obligation, to defend a lawsuit or control litigation, a lawsuit, or undertake any type of invalidity proceedings, such as the present IPR. We agree with Patent Owner that a reasonable interpretation of the indemnification provision could include obtaining a license. *Id.* at 50. There is, however, no express language or evidence that Patent Owner points to that persuades us to interpret the language of the indemnification provision as requiring ION to “defend a lawsuit,” and thus extend the provision to include a specific obligation to defend, or pay for, a lawsuit filed against Petitioner or to undertake an IPR proceeding. Petitioner’s letter of November 13, 2012 to ION, does not actually “invoke” any certain part of the Agreement or refer to any necessity for ION to step in and defend a lawsuit, the letter refers only to “appropriate remedies.” *See* Ex. 2027. In fact, a previous email sent July 6, 2012 from Phillip Shotts of ION to Kevin Hart at PGS, summarizing ION’s Product Assurance Pledge, also does not specify or imply any

IPR2014-00688

Patent 7,080,607 B2

obligation on the part of ION to defend PGS from a lawsuit, reimburse or pay for a lawsuit, or file an invalidity proceeding. *See* Ex. 2022.

Based on the record before us ION does not have an obligation to step in and defend Petitioner against a lawsuit or to otherwise pay for the defense of a lawsuit and advance Petitioner as ION's proxy. The mere existence of an indemnification agreement does not establish that the indemnitor has the opportunity to control an *inter partes* review. "The mere existence of an indemnification agreement [however] does not establish that the indemnitor has the opportunity to control an *inter partes* review." *Nissan North America, Inc. v. Diamond Coating Tech., LLC*, Case IPR2014- 01546, slip. op. at 7 (PTAB Apr. 21, 2015) (determining that the existence of an indemnification agreement was not sufficient to establish that the unnamed parties were real parties-in-interest to the *inter partes* review proceeding)

Patent Owner argues still further that the nature of Petitioner and ION's close relationship shows that ION is controlling, or has the ability to control this IPR as an RPI. PO Resp. 52–54. Patent Owner argues specifically that "Petitioner and ION have coordinated efforts across multiple forums to promote their joint interests regarding the '607 patent," and that a common interest privilege was asserted by Petitioner over communications between ION and Petitioner. *Id.* at 52. There is nothing surreptitious about separate entities, as either third parties, or separate parties to a legal action, proclaiming shared interests to protect communications that are relevant to advance the interests of the entities possessing the common interest. *See In re Regents of Univ. of California*, 101 F.3d 1386, 1389 (Fed. Cir. 1996) ("The protection of communications among clients and attorneys 'allied in a common legal cause' has long been recognized.") (quoting *In re Grand Jury Subpoena Duces Tecum*, 406 F.Supp. 381, 386 (S.D.N.Y.1975)).

IPR2014-00688

Patent 7,080,607 B2

The fact that Petitioner and ION, have a desire, and common interest, in invalidating the '607 patent and other WesternGeco patents, and have collaborated together, and invoked a common interest privilege with respect to sharing potentially invalidating prior art references, does not persuade us that ION has the ability to control the instant Petition or is directing or funding the present proceeding.

With respect to the ability to control, the Board has issued decisions determining, based on evidence of control, that a non-party entity is a real party-in-interest. *See Zoll Lifecor Corp. v. Philips Elecs. North America Corp.*, Case IPR2013-00609 (PTAB Mar. 20, 2014) (Paper 15) (the “Zoll Decision”). In the Zoll Decision, the Board was persuaded that an unnamed party to the IPR, Zoll Medical, exercised consistent control over Zoll Lifecore for over six years, including control of the *inter partes* review. *Id.* at 11. Specific evidence of control included Zoll Lifecor’s acknowledgment that Zoll Medical controlled 100% of Zoll Lifecor and approved Zoll Lifecor’s corporate budget and plans. *Id.* Other evidence of control included the fact that common counsel for Zoll Medical and Zoll Lifecor would not state affirmatively that counsel did not provide input into preparation of the IPRs. *Id.* at 11–12. Additional evidence showed that only Zoll Medical’s management team attended court-ordered mediation in the underlying district court litigation filed against Zoll Lifecor. *Id.* at 12.

We have no such evidence in this proceeding. ION and Petitioner are not related corporate entities. The evidence of record here shows that Petitioner and ION preliminarily discussed potential remedies relating to the product itself, not indemnification from litigation. Exs. 2022, 2027. As discussed above, absent specific facts evidencing the contractual obligations of the parties, we are not apprised of any evidence from the Agreement

IPR2014-00688

Patent 7,080,607 B2

indicative of control, or potential to control, this *inter partes* proceeding by ION. Furthermore, based on the record before us, Patent Owner has not established that ION has the ability or opportunity to control the present proceeding to the degree that would be expected from a formal copetitioner. As such, we are not persuaded that ION is an RPI to this proceeding, and the fact that the PGS Petition does not identify ION does not prevent the Board from considering Petitioner's grounds of unpatentability.

2. *Additional Discovery*

Patent Owner next argues that the Board prejudicially denied Patent Owner additional discovery on this RPI issue after "Petitioner failed to forthrightly answer Interrogatory No. 5." PO Resp. 56–57 (*citing* Ex. 2018 at 14). Our review of Exhibit 2018 indicates that contrary to Patent Owner's assertion, Petitioner unambiguously affirmed that Petitioner had made no claims or demands to ION for indemnity with respect to the '607 patent. Patent Owner also asserts that the Agreement, Exhibit 2069 was not available to the Board prior to our Decision to Institute. *Id.* at 57. As discussed above Exhibit 2069 is now available, and having been considered, for the reasons set forth above does not alter our underlying determination above that ION is not a real party-in-interest.

3. *Multi Klient*

Patent Owner argues that a new, and allegedly wholly owned subsidiary of Petitioner, Multi Klient Invest AS ("Multi Klient"), has been revealed in the district court litigation as an "interest[ed] parties concerning the subject matter of the '607 patent." PO Resp. 57–59 (*citing* Ex. 2076). The fact that Multi Klient may be related to Petitioner and is indicated as having a financial interest in the outcome of litigation, however, does not by itself indicate that Multi Klient has any ability to control the present IPR

IPR2014-00688

Patent 7,080,607 B2

proceeding. *See* Ex. 2076 (referring to Paragraph 2 of Order for Pretrial Conference as determinative of “financially interested” defendants.)

Accordingly, we are not persuaded on these facts that Multi Klient is an RPI to this proceeding and deny Patent Owner’s request for additional discovery into this matter.

4. *Service*

Under 35 U.S.C. § 315(b), a party may not file a petition for *inter partes* review if the party had been served with a complaint alleging infringement more than one year previously. Patent Owner argues that Petitioner was subpoenaed and “appeared” in the ION litigation prior to being “served” with a complaint alleging infringement of the ’607 patent on March 14, 2011, and, therefore, “Petitioner’s one year clock to file a petition started ticking at this time.” PO Resp. 59.

A review of the litigation history establishes that on June 12, 2009, Patent Owner filed, via the court’s electronic case filing procedure (“ECF”), a complaint initiating the ION lawsuit, alleging infringement of the ’607 patent against ION based on ION’s “DigiFIN” and other products. Ex. 2007. Patent Owner also filed a similar complaint against a company called Fugro, a customer of ION, which was consolidated with the ION lawsuit. Ex. 2037. On December 8, 2009, remarking that Petitioner may have been involved in the design and testing of the ION products, Patent Owner provided Petitioner via email with a copy of the complaint against ION. Ex. 2008. Subsequently, Patent Owner subpoenaed Petitioner on January 22, 2010 to produce documents and evidence relating *inter alia* to Petitioner’s use and operation of ION’s DigiFIN product. Ex. 2009. In response to the subpoena, Petitioner appeared in the ION lawsuit through its counsel, Heim, Payne & Chorush. Ex. 2011. On March 14, 2011, Patent Owner filed an

IPR2014-00688

Patent 7,080,607 B2

amended complaint in the ION lawsuit via the court's electronic filing system ("ECF"), naming ION and Fugro, but not Petitioner. Ex. 2012. Patent Owner apparently believes that because Petitioner's counsel, as an ECF notice recipient in the ION lawsuit, received a copy of the amended complaint against Fugro and ION on March 14, 2011, Petitioner was therefore "served" in accordance with 35 U.S.C. § 315(b) the same day. PO Resp. 50. Thus, it is Patent Owner's position that because Petitioner was "served" with the complaint more than one year before filing, the Petition here is now time-barred.

The Board has dealt with similar arguments regarding the statutory interpretation of 35 U.S.C. § 315(b) before in *Motorola Mobility LLC v. Arnouse*, Case IPR2013-00010 (PTAB Jan. 30, 2013) (Paper 20) (the "*Motorola* decision"). For reasons similar to those set forth in the *Motorola* decision, we do not adopt the statutory construction that mere receipt of a complaint, via email or even ECF, initiates the one-year time period. We specifically agree with the *Motorola* Panel's review and interpretation of the legislative history and intent of 35 U.S.C. § 315(b) in that, "[w]e do not believe that the Congress intended to have the time period start before a petitioner is officially a defendant in a law suit." *Id.* at 5.

Patent Owner specifically argues that the present proceeding differs from *Motorola* because in the ION lawsuit "Petitioner was served with process and formally appeared," (emphasis omitted) and was thus "brought under a court's authority, by formal process' before being served with the amended complaint." Prelim. Resp. 7–8 n.1 (citing *Murphy Bros., Inc. v. Michetti Pipe Stringing, Inc.* 526 U.S. 344, 347 (1999)). Despite this factual difference from *Motorola*, Petitioner was not, and never has been, a party defendant in the ION lawsuit.

Petitioner, in the ION lawsuit, was served under Fed. R. Civ. P. 45, with a third party subpoena, to produce documents and things relating to the ION lawsuit. *See Ex. 2009*. Although a person, or entity, may have been served properly with a subpoena, and may fall under a court’s authority for purposes of producing appropriate documents and things not protected by a privilege or protection, Fed. R. Civ. P. 45(c)–(e) does not express, or imply, that a person subject to the subpoena is a “defendant” to a lawsuit. Indeed, Fed. R. Civ. P. 45 specifically differentiates between a “person” served with the subpoena, and “a party” to the lawsuit. *See Fed. R. Civ. P. 45 (d)(2)(B)* (“A person commanded to produce documents or tangible things or to permit inspection may serve on the party or attorney designated in the subpoena a written objection to inspecting, copying, testing or sampling any or all of the materials.”). We are aware of no case law or precedent, nor has Patent Owner cited to any, indicating that serving a person with a subpoena, and subjecting them to the authority of the court in enforcing such subpoena under Fed. R. Civ. P. 45(e), provides sufficient legal process to make such person a defendant to a lawsuit.

Thus, Petitioner was not a defendant in the ION lawsuit. Concomitant with our colleagues’ *Motorola* decision, we interpret 35 U.S.C. § 315(b) as requiring service upon a defendant to the lawsuit. Petitioner was not a defendant; thus, it was never “served with a complaint” in the ION lawsuit as required by 35 U.S.C. § 315(b).⁷

⁷ Patent Owner’s argument that S.D. Texas L.R. 5-1 “comports” (PO Resp. 59) with the proper interpretation of service under §315(b) is not persuasive as to the intent of Congress with respect to §315(b). *See* 157 Cong. Rec. S5429 (daily ed. Sept. 8, 2011) (statement of Senator Kyl) (“it is important that the section 315(b) deadline afford defendants a reasonable opportunity

IV. MOTION TO EXCLUDE EVIDENCE

Petitioner filed a Motion to Exclude Evidence seeking to exclude portions of the testimony of Robin Walker (Ex. 2077) and numerous other exhibits submitted by Patent Owner. Paper 85. The party moving to exclude evidence bears the burden of proving that it is entitled to the relief requested—namely, that the material sought to be excluded is inadmissible under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.20(c), 42.62(a). Even without excluding this evidence, we have determined that Petitioner has established, based on a preponderance of the evidence, the unpatentability of claims 1 and 15 of the '607 patent. Furthermore, from Petitioner's listed Exhibits on page 1 of its Motion to Exclude, our Decision includes only references to Exhibits 2007, 2012, 2034–36, and 2077. Exhibits 2007 and 2012 are referred to merely for background procedural dates, Exhibits 2034–2036 are identified as not being considered, and for Exhibit 2077, Petitioner's hearsay arguments do not pertain to the particular paragraphs of Mr. Walker's testimony that we substantively considered. *See* Section III.E.

For these reasons, we deny Petitioner's Motion to Exclude.

V. CONCLUSION

We conclude that Petitioner has demonstrated by a preponderance of the evidence that (1) claims 1 and 15 of the '607 patent are anticipated by Workman, (2) claims 1 and 15 of the '607 patent are unpatentable as obvious over Workman, and (3) claims 1 and 15 of the '607 patent are obvious in view of Workman and Elholm.

to identify and understand the patent claims that are relevant to the litigation”).

IPR2014-00688

Patent 7,080,607 B2

This is a final written decision of the Board under 35 U.S.C. § 318(a). Parties to the proceeding seeking judicial review of this decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

VI. ORDER

For the reasons given, it is

ORDERED that claims 1 and 15 of U.S. Patent No. 7,080,607 are determined by a preponderance of the evidence to be unpatentable;

FURTHER ORDERED that Patent Owner's request for additional discovery with respect to Multi Klient AS is denied;

FURTHER ORDERED that Petitioner's Motion to Exclude is denied;
and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2014-00688
Patent 7,080,607 B2
For PETITIONER:

David. Berl
Thomas S. Fletcher
Jessamyn Berniker
Christopher Suarez
Williams & Connolly, LLP
dberl@wc.com
tfletcher@wc.com
jberniker@wc.com
csuarez@wc.com

W. Karl Renner
Roberto Devoto
David L. Holt
Fish & Richardson P.C.
IPR37136-0004IP1@fr.com

For PATENT OWNER:

Michael L. Kiklis
Scott A. McKeown
Kevin B. Laurence
Katherine D. Cappaert
Christopher Ricciuti
OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
CPdocketMcKeown@oblon.com
CPdocketKickless@oblon.com

Timothy K. Gilman
Kirkland & Ellis, L.L.P.