

**United States Court of Appeals  
for the Federal Circuit**

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**SEABED GEOSOLUTIONS (US) INC.,**  
*Appellant*

v.

**MAGSEIS FF LLC,**  
*Appellee*

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2020-1237

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2018-  
00960.

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Decided: August 11, 2021

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JOHN R. LANE, Fish & Richardson, PC, Houston, TX,  
argued for appellant. Also represented by DANIELLE J  
HEALEY, BRIAN GREGORY STRAND.

RUBEN JOSE RODRIGUES, Foley & Lardner LLP, Boston,  
MA, argued for appellee. Also represented by JEFFREY  
COSTAKOS, Milwaukee, WI.

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Before MOORE, *Chief Judge*, LINN and CHEN, *Circuit  
Judges*.

MOORE, *Chief Judge*.

Seabed Geosolutions (US) Inc. appeals a final written decision of the Patent Trial and Appeal Board concluding that Seabed failed to prove the challenged claims of U.S. Reissue Patent No. RE45,268 were anticipated or would have been obvious. *Seabed Geosolutions (US), Inc. v. Magseis FF LLC*, No. IPR2018-00960, 2019 WL 6442060 (P.T.A.B. Nov. 26, 2019) (*Board Decision*). Because the Board erred in construing the claims of the '268 patent, we vacate and remand.

#### BACKGROUND

The '268 patent is directed to seismometers for use in seismic exploration. '268 patent at Abstract. Seismic exploration generally involves sending an acoustic signal into the earth and using seismic receivers called geophones to detect “seismic reflections” from subsurface structures. *Id.* at 1:27–35, 47–52. Every independent claim of the '268 patent recites, in pertinent part, a “geophone internally fixed within” either a “housing” or an “internal compartment” of a seismometer. *Id.* at claims 1, 5, 21, 22.

Magseis FF LLC's predecessor<sup>1</sup> sued Seabed for patent infringement in the United States District Court for the Southern District of Texas. *Magseis FF LLC v. Seabed Geosolutions (US) Inc.*, No. 4:17-cv-01458 (S.D. Tex. filed May 11, 2017). On April 27, 2018, Seabed petitioned for *inter partes* review of the '268 patent on multiple grounds. The Board instituted review and found that the cited prior art did not disclose the geophone limitation. Based on that finding, the Board determined Seabed failed to prove the challenged claims were unpatentable. Seabed appeals, arguing the Board erred in its construction of the geophone

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<sup>1</sup> Fairfield Industries Inc. transferred all relevant assets to Fairfield Seismic LLC, which changed its name to Magseis FF LLC. J.A. 338.

limitation. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

We review the Board’s ultimate claim construction and any supporting determinations based on intrinsic evidence de novo. *Personalized Media Commc’ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1339 (Fed. Cir. 2020). We review subsidiary fact findings involving extrinsic evidence for substantial evidence. *Id.*

For *inter partes* review petitions filed before November 13, 2018, the Board uses the broadest reasonable interpretation (BRI) standard to construe claim terms. *See* 37 C.F.R. § 42.100(b) (2017). Under that standard, “claims are given their broadest reasonable interpretation consistent with the specification, not necessarily the correct construction under the framework laid out in *Phillips*.” *PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, 815 F.3d 734, 742 (Fed. Cir. 2016) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc)). But we still “give[] primacy” to intrinsic evidence, and we resort to extrinsic evidence to construe claims only if it is consistent with the intrinsic evidence. *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973, 977 (Fed. Cir. 2014); *see also Phillips*, 415 F.3d at 1318 (“[A] court should discount any expert testimony ‘that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history.’” (quoting *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998))).

The Board construed “geophone internally fixed within [the] housing” to require a non-gimbaled geophone. It found, based entirely on extrinsic evidence, that “fixed” had a special meaning in the relevant art at the time of the invention: “not gimbaled.” *Board Decision*, 2019 WL 6442060, at \*7–8. For claim construction, however, we begin with the intrinsic evidence, which includes the

claims, written description, and prosecution history. *See Tempo Lighting*, 742 F.3d at 977. If the meaning of a claim term is clear from the intrinsic evidence, there is no reason to resort to extrinsic evidence. *See Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016) (“Extrinsic evidence may not be used ‘to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” (quoting *Phillips*, 415 F.3d at 1324)).

The claims recite a “geophone internally fixed within [the] housing.” We conclude, based upon the intrinsic evidence, that the word fixed here carries its ordinary meaning, i.e., attached or fastened. *See* J.A. 2435–36. The adverb internally and the preposition within straddling the word fixed indicate that it specifies the geophone’s relationship with the housing, not the type of geophone. The plain language therefore supports interpreting “internally fixed within” to mean mounted or fastened inside.

This construction is consistent with the specification, which is “the single best guide to the meaning of [the] disputed term.” *Phillips*, 415 F.3d at 1320–21 (quoting *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The specification describes mounting the geophone inside the housing as a key feature of the invention. By contrast, it says nothing about the geophone being gimbaled or non-gimbaled. Given that context, a skilled artisan would understand the claim term “geophone internally fixed within [the] housing” merely specifies where the geophone is mounted and has nothing to do with gimbaling.

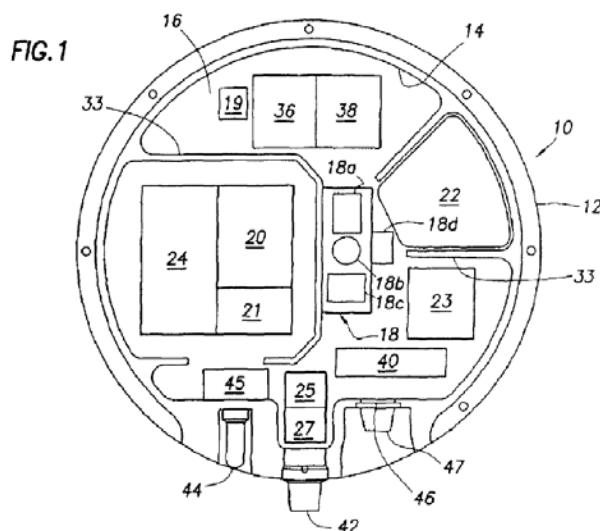
The specification claims it was “conventional thinking” to separate the geophone from a seismometer’s other components to maximize coupling with the earth. ’268 patent at 2:42–49. This required external cabling, which the specification criticizes as expensive, difficult to handle and maintain, and susceptible to failure in extreme environments. *Id.* at 2:23–37, 2:49–54, 3:34–48. To avoid these issues, the specification discloses a geophone that is

“[d]isposed” and “internally mounted within” the seismometer housing. *Id.* at 6:30–32, 43–45; *see also id.* at 4:15–19 (“[A]ll of the electronics are disposed within or on the case, including a geophone package . . .”). This had allegedly never been done before. *Id.* at 7:31–34 (“[N]one of the prior art devices comprise a self-contained seismic recording unit as described herein. Rather, the prior art units separate the geophone package from the electronics of the rest of the unit.”). The specification touts its integrated approach, repeating 18 times that the invention is “self-contained” and explaining that it “requires no external wiring or connection.” *Id.* at 6:43–45. The specification does not purport to disclose a particular type of geophone. *See id.* at 6:49–55 (stating that the invention uses “conventional geophones”). These disclosures make clear that the crux of the invention is mounting a generic geophone inside the housing. This supports an interpretation of the claimed “geophone internally fixed within [the] housing” as requiring *mounting* any type of geophone in the housing.

The specification never mentions gimbaled or non-gimbaled geophones, nor does it provide a reason to exclude gimbals. That silence does not support reading the claims to exclude gimbaled geophones. *Cf. Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012) (“Negative claim limitations are adequately supported when the specification describes a reason to exclude the relevant limitation.”); *Williams v. Gen. Surgical Innovations, Inc.*, 60 F. App’x 284, 287 (Fed. Cir. 2003) (non-precedential) (“The absence of a requirement to leave the expander in place is not a teaching to remove it.”). Magseis admits that gimbaled geophones were common in the art, yet there is no mention of them in the specification. Appellee’s Br. 44 (“At the time of filing, . . . for marine applications, . . . historically gimbaled geophones were used.”). The specification does, however, disclose a gimbaled clock, revealing that the applicant was aware of gimbals at the time of the invention. ’268 patent at Abstract, 4:20–22, 7:66–8:7. If the patentee had

wanted to distinguish between gimbaled and non-gimbaled geophones, it knew how to do so and could have indicated as much in the specification. But it did not.

Magseis' argument that the specification limits the claims to a non-gimbaled geophone is unpersuasive. *See* Appellee's Br. 8–10. Magseis cites Figure 1 and the text at column 6, lines 43 through 49. *Id.* We do not agree that the cited portions of the specification describe a non-gimbaled geophone. Figure 1 is a rudimentary schematic that depicts geophone 18 as a mere black box inside compartment 16:



Magseis' expert, Rocco Detomo, testified that Figure 1 is "not a mechanical drawing." J.A. 1670 at 291:5–12. As for column 6, it merely discloses a "conventional geophone[]" that is "internally mounted within pod 10 and thus requires no external wiring or connection." '268 patent at 6:43–55. Silence about gimbals does not evidence the absence of gimbals. We therefore reject Magseis' argument that the specification describes only a non-gimbaled geophone.

Consistent with the specification, the prosecution history suggests the construction of the word fixed as mounted or fastened. Each time the word fixed came up in prosecution, the applicant and examiner understood it in its ordinary sense, i.e., mounted or fastened. For example, to support the geophone limitation, the applicant cited the specification's disclosure of a geophone "disposed, and electrically connected, within the internal compartment."<sup>2</sup> J.A. 710. In doing so, the applicant implicitly equated the claim term "internally fixed within" with "disposed, and electrically connected, within." That equivalence reveals the applicant understood the word fixed to mean mounted. Other discussions of the word fixed in the prosecution history are similar. See J.A. 1484 (examiner equating "internally fixed in the housing" with "mounted . . . within the case"); J.A. 3059 (examiner distinguishing a geophone that is "fixed inside of the housing" from a geophone that is ejected from the housing); J.A. 3083–84 (applicant adding "fixed" to the claims and drawing the same distinction the examiner did). The prosecution history therefore supports interpreting the claims according to the common usage of the word fixed.

We reject Magseis' contention that Seabed waived certain arguments concerning the prosecution history by failing to raise them below. The doctrine of waiver does not preclude a party from supporting its original claim construction with new citations to intrinsic evidence of record. See *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1346 (Fed. Cir. 2001). Seabed's arguments on appeal do not change the scope of the construction it

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<sup>2</sup> Because the '268 patent is a reissue patent, the applicant had to provide "an explanation of the support in the disclosure of the patent for [any] changes made to the claims," which included the addition of claim 22. 37 C.F.R. § 1.173(c).

advanced below, i.e., that “internally fixed within” does not exclude gimbaled geophones. J.A. 446–51. And Magseis does not claim that Seabed’s arguments rely on intrinsic evidence that was not in the record below. Accordingly, we see no waiver.

The intrinsic evidence consistently informs a skilled artisan that “fixed” in the claims means mounted or fastened. Given the clarity of the intrinsic evidence, resort to extrinsic evidence is unnecessary. Thus, to the extent the Board relied on extrinsic evidence to alter the meaning of “fixed” that is clear from the intrinsic evidence, that was error.

#### CONCLUSION

The intrinsic evidence as a whole supports an interpretation of “geophone internally fixed within [the] housing” that does not exclude gimbaled geophones. The Board erred in reaching a narrower interpretation. We therefore vacate and remand for further proceedings consistent with this opinion.

#### **VACATED AND REMANDED**

#### COSTS

Costs to Appellants.