

2021-2349

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

INFERNAL TECHNOLOGY, LLC, TERMINAL REALITY, INC.,
Plaintiffs-Appellants

v.

ACTIVISION BLIZZARD, INC.,
Defendant-Appellee
2021-2349

**Appeal from the United States District Court for the Northern District of
Texas in Case No. 3:18-cv-01397-M, Chief Judge Barbara M.G. Lynn.**

**PLAINTIFFS-APPELLANTS CORRECTED PETITION FOR PANEL
REHEARING AND REHEARING EN BANC**

ERIC W. BUETHER
CHRISTOPHER M. JOE
KENNETH P. KULA
BUETHER JOE & COUNSELORS, LLC

1700 Pacific Avenue, Suite 4750
Dallas, Texas 75201
(214) 466-1271

*Attorney for Plaintiffs-Appellants
Infernal Technology, LLC, Terminal
Reality, Inc.*

February 24, 2023

CERTIFICATE OF INTEREST

Counsel for Plaintiffs – Appellants certify under Federal Circuit Rule 47.4 that the following information is accurate and complete to the best of their knowledge:

1. Represented Entities. Fed. Cir. R. 47.4(a)(1). Provide the full names of all entities represented by undersigned counsel in this case.

Infernal Technology, LLC
Terminal Reality, Inc.

2. Real Party in Interest. Fed. Cir. R. 47.4 (a)(2). Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.

None/Not Applicable

3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3). Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.

None/Not Applicable

4. Legal Representatives. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Fed. Cir. R. 47.4 (a)(4).

Michael C. Pomeroy
Michael D. Ricketts
Blake W. Buether
Niky Bagley
Michael W. Doell
Matthew P. Harper
Nicholas C. Klierwer
Theresa M. Dawson
Thomas J. Gohn
Bragalone Olejko Saad PC
Jeffery R. Bragalone
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5. Related Cases. Provide the same titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. Do not include the originating case number(s) for this case. Fed. Cir. R. 47.4(a)(5). See also Fed. Cir. R. 47.5(b).

Pursuant to Federal Circuit Rule 47.4(a)(5), Plaintiffs – Appellants list the following pending cases:

- Infernal Technology, LLC, et al. v. Sony Interactive Entertainment America, LLC, No. 2:19-cv-00248-JRG (E.D. Tex.)
- Infernal Technology, LLC, et al. v. Epic Games, Inc., No. 5:19-CV-00516-BR (E.D.N.C.)
- Infernal Technology, LLC, et al. v. Take-Two Interactive Software, Inc., No. 1:19-cv-09350-JGK-KNF (S.D.N.Y.)
- Infernal Technology, LLC, et al. v. Ubisoft, Inc., No. 5:20-CV-00223-D (E.D.N.C.)

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. R. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

None/Not Applicable

FEBRUARY 24, 2023

/s/ Eric W. Buether

Eric W. Buether

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STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel opinion is contrary to the following precedents of this Court:

- *Enzo Biochem Inc. v. Applera Corp.*, 780 F.3d 1149, 1154–55 (Fed. Cir. 2015);¹
- *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338 (Fed. Cir. 2008);²

In addition, based on my professional judgment, I believe this appeal requires an answer to the following questions of exceptional importance:

1. An open-ended claim term, such one using the term “at least,” includes, but is not limited to, one or more of the specified items of data, and may or may not include additional unspecified data. Can this open-ended scope of such a claim term be nullified or modified based upon the evidence relied upon to prove infringement?
2. The term “said” is regarded as an anaphoric phrase that merely refers back to the initial antecedent phrase and does not alter the meaning of the phrase. Can the Court use the term “said” to modify the undisputed construction of the term?

¹ And other cases that explain the “open-ended” claim construction rule, such as *SanDisk Corp. v. Kingston Tech. Co.*, 695 F.3d 1348, 1360–61 (Fed. Cir. 2012), and *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999).

² And other cases that explain the rule that the term “said” is an anaphoric phrase that merely refers back to the initial antecedent phrase and does not “alter that meaning in the slightest.”)

These questions are exceptionally important because open-ended claim terms in conjunction with the claim term “said” are used frequently in claims reviewed by this Court each year, and by patent practitioners in the drafting of claims for patenting. The Court and the bar would thus benefit from *en banc* clarification of how these terms should be applied individually and together.

The undersigned is mindful of this Court’s Practice Notes to Rule 35 that states that “[a] petition for rehearing en banc is rarely appropriate if the appeal was the subject of a nonprecedential opinion by the panel of judges that heard it.” Nevertheless, in this case, the panel principally relied upon (and misapplied) a nonprecedential opinion in reaching its decision. In addition, pursuant to Federal Circuit Rule 32.1, parties are allowed to cite to this Court nonprecedential dispositions.

/s/ Eric W. Buether
Eric W. Buether
Counsel for Appellants

INTRODUCTION

This is an appeal from the grant of a summary judgment of noninfringement in a patent infringement case. The District Court granted summary judgment of noninfringement after issuing a comprehensive claim construction ruling that, among other things, provided an open-ended construction of the term “observer data” as including “at least” color data. This construction was agreed to by the parties. At the summary judgment phase, however, the District Court did not honor this open-ended claim construction of “observer data” and misused the use of the phrase “**said** observer data” in the claims to improperly transform the open-ended construction of observer data as “at least” the color of objects to “all observer data” provided by the accused product in performing the asserted method claim.

On appeal, the Panel affirmed the District Court’s grant of summary judgment of noninfringement in an opinion that repeated the District Court’s improper use of the “antecedent basis rule” relating to the use of the term “said” in connection with the term “observer data.” By doing so, the Panel essentially eviscerated the agreed-to open-ended construction of “observer data” as including, but is not limited to, color data. In addition, the Panel opinion asserted that it could reconstrue this claim term in this manner based upon the evidence relied upon by plaintiffs to prove that the accused products infringed the asserted patent. The Panel’s misapplication of the anaphoric phrase “said,” that merely refers one back to the initial use of the

antecedent phrase but does not alter the meaning of that phrase at all, is not only error, but it threatens to be an error that will reoccur with regrettable frequency.

ARGUMENT

A. It is Undisputed that the Agreed To Construction of “Observer Data” is Open-Ended

It is undisputed that the District Court’s agreed-to construction of the term “observer data” as including “at least the color of objects” is an open-ended construction that only requires the term to include the “color of objects,” but it may include additional observer data. Panel Op. at 6 (“the district court’s construction of ‘observer data’ is open-ended such that it encompasses ‘at least color data’ as well as other types of data”). This comports with the well-established meaning of the term “at least” as meaning one or more of the items in question. *See Enzo Biochem Inc. v. Applera Corp.*, 780 F.3d 1149, 1154–55 (Fed. Cir. 2015); *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345, 51 U.S.P.Q.2d 1377 (Fed. Cir. 1999). The Panel acknowledged that the parties agreed to the open-ended construction of “observer data” adopted by the District Court, and purported to determine whether the District Court properly applied that construction when granting summary judgment of noninfringement, Panel Op. at 5.

The Panel Opinion, however erroneously “re-constructed” the term “observer data” to mean the minimum set of observer data relied upon by Infernal to satisfy each of the observer data steps as a matter of infringement. Panel Op. at 6, 8-9.

Because the agreed construction of the term “observer data” is the open-ended definition of “at least the color of objects,” the observer data that can satisfy one of “observer data” steps can include a different set of observer data than what can satisfy the other “observer data” step as long as each set of observer data contains “at least the color of objects.” That is the essence of an open-ended definition of a claim term. The Panel Opinion, however, undermines that essence.

B. The Use of the Anaphoric Phrase “Said” Does Not Affect the Meaning of the Initial Antecedent Phrase “Observer Data”

The Panel attempted to justify its reconstruction of “observer data” in this manner based upon the use of the term “said” in observer data steps 1(c) and 1(d).

As the Panel declared:

Although the initial “observer data” in step 1(a) includes data that is “at least color data,” the use of the word “said” indicates that each subsequent instance of “said observer data” must refer back to the same “observer data” initially referred to in step 1(a). An open-ended construction of “observer data” (“data representing at least the color of objects”) does not permit each instance of “observer data” in a claim to refer to an independent set of data. Thus, the term “observer data” cannot refer to different data among steps 1(a), 1(c), and 1(d).

Panel Op. at 6.

This reasoning by the Panel reflects an erroneous application of the term “said” that results in a material and improper revision of the agreed upon construction of the term “observer data” **throughout the claim**, and an evisceration of the open-ended nature of that construction. It bears emphasis that this Court has

repeatedly held that “the claim term ‘said’ is an ‘anaphoric phrase[], referring to the initial antecedent phrase.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1343 (Fed. Cir. 2008). *See also Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015). Most importantly, “the anaphoric phrases do not alter that meaning in the slightest.” *Baldwin*, 512 F.3d at 1343.

Thus, the use of the term “said observer data” simply refers one back to the initial antecedent phrase using the term “observer data.” The Panel correctly observed that, “[u]nder this principle, the term ‘said observer data’ recited in steps 1(c) and 1(d) must refer back to the ‘observer data’ recited in step 1(a) -- i.e., the ‘observer data’ in step 1(a) is the *same* ‘observer data’ in steps 1(c) and 1(d).” Where the Panel got it seriously wrong, however, was when it concluded that the “same observer data” was the observer data that Infernal relied upon to satisfy these steps and prove infringement, rather than the term “observer data” as construed by the District Court. Indeed, as the Panel acknowledged, “the district court’s construction of ‘observer data’ is open-ended such that it encompasses ‘at least color data’ as well as other types of data.” This open-ended definition of “observer data” is the “same observer data” to which the terms “said observer data” refers.

C. The Panel’s Opinion Improperly Reconstructed the Claim Term “Observer Data”

Notwithstanding the agreed open-ended construction of “observer data,” the Panel contended that:

An open-ended construction of “observer data” (“data representing at least the color of objects”) does not permit each instance of “observer data” in a claim to refer to an independent set of data. Thus, the term “observer data” cannot refer to different data among steps 1(a), 1(c), and 1(d).

Panel Op. at 6. There are several serious problems with this statement.

First, this statement is entirely inconsistent with the open-ended construction given for the term “observer data” – “at least the color of objects.” In accordance with this definition, “observer data” must include color data but may include any additional observer data. Thus, the “said observer data” required in step 1(d) that falls within this open-ended definition can consist of a different set of data than the “said observer data” in step 1(c) or step 1(d), as long as it includes at least color data. Each set of “observer data” required for each of the steps 1(a), 1(c), and 1(d) is an “independent set of data” in this sense. But each set of such “observer data” is not “independent” in that they must all include “color data,” as required by the construction of the term.

The Panel, therefore, inappropriately engaged in the “reconstruction” of the “observer data” claim language by improperly using the anaphoric term “said” to eliminate the open-ended construction of the term “observer data” and replace it with a closed ended construction requiring the components of “observer data” to be fixed or uniform. Panel Op. at 6. This is apparent from the Panel’s use of the phrase

“[o]ur construction of ‘said observer data’” Panel Op. at 6 (emphasis added).³

D. The Cases Cited by the Panel Involved Claim Construction and are Inapplicable

Furthermore, the Panel cited in a footnote various cases in support of its “construction.” Panel Op. at 6 n.3. These decisions do not support the Panel’s decision. For example, the Panel cited to and relied upon heavily the unpublished decision in *Creative Internet Advert. Corp. v. Yahoo!, Inc.*, 476 F. App’x 724 (Fed. Cir. 2011). The Panel’s reliance on that unpublished opinion in *Creative Internet* is misplaced. Most importantly, the court in that case addressed the issue of the proper construction of a claim before it. The court in that case held that the plaintiff’s “broader claim construction is incorrect.” *Id.* at 728. The *Creative Internet* court observed that the phrase in dispute – “‘an end user message,’ is broad enough to cover multiple messages,” as the plaintiff asserted. But the court rejected that claim construction position, finding that “[t]he claim language makes clear that all three logical elements must act, at least once, on the same message or messages.” *Creative Internet*, therefore, does not support the Panel’s reconstruction of the term “said observer data.”⁴

³ See, e.g. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 805 F.3d 1368, 1376 (Fed. Cir. 2015) (stating when the parties have agreed to a claim construction, there is no basis for narrowing that construction by adding limitations.)

⁴ Similarly, this Court in *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350 (Fed. Cir. 1999), also relied upon by the Panel, involved a claim construction

Another problem with the Panel’s reconstruction of the “observer data” claim term to remove the open-ended construction of the term is that the Panel’s reconstruction is based upon the observer data that Infernal presented to satisfy these steps from an infringement perspective, rather than a claim construction perspective. This is inconsistent with the District Court’s open-ended construction, as the District Court observed:

In addition, during *Markman*, the parties agreed that “observer data of a simulated multidimensional scene” means “data representing *at least* the color of objects in a simulated multidimensional scene as viewed from an observer’s perspective.” *Markman* Order, at 39 (emphasis added). **Thus, observer data includes, but is not limited to, color data, and may include additional data depending on Plaintiffs’ infringement theory and contentions.**

Appx0014 (Summary Judgment Order at 13) (emphasis added). Thus, the meaning of “observer data” does not depend on the “observer data” evidence Infernal selects to satisfy an “observer data” step to prove infringement. The District Court correctly observed, however, that the additional (other than color data) “observer data” that can be used to satisfy an “observer data” step may depend on “Plaintiffs’ infringement theory and contentions.”

ruling where the Court construed the term “discharge rate,” as used in separate clauses, as having same meaning. In this case, the parties did not dispute that the term “observer data” used in the separate clauses of the claim had the same open-ended meaning – “data representing at least the color of objects” The Panel, however, did not abide by that agreed-upon claim construction.

This makes sense for at least two reasons, First, “[a] claim is construed in the light of the claim language, the other claims, the prior art, the prosecution history, and the specification, *not* in light of the accused device.” *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (emphasis in the original). Second, construing the contents of a claim term as depending on a party’s infringement theory and contentions would make the meaning of the claim term dependent upon the infringement theory and contentions applicable to a particular defendant’s accused product. This would be improper and likely render the claim indefinite.

E. The Panel’s “Portion of Said Observer Data” Claim Construction Analysis is Misplaced and Mistaken

The Panel’s opinion points to the fact that “step 1(c) recites ‘*at least a portion of said observer data,*’” and asserts that this “indicat[es] that the patentee knew how to draft a limitation that refers to a subset of the ‘observer data.’” Panel Op. at 7. The Panel then further asserts that the fact that “the patentee did not claim a subset of ‘observer data’ in step 1(d) indicates that the patentee intended to refer to the same ‘observer data’ in steps 1(a) and 1(d).” *Id.* This, however, is a claim construction argument that has no place in an opinion addressing whether Infernal submitted evidence showing the presence of a genuine issue of disputed fact based upon the agreed claim construction adopted by the District Court. Indeed, the Panel’s citation to the holding in *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir.

2001) that “a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent” underscores the fact that the Panel impermissibly engaged in “reconstruction” of the already agreed-to construction of the relevant claim language rather than a determination of whether Activision demonstrated that there was no evidence showing a genuine issue of disputed fact based upon the agreed-upon claim construction.

Similarly, the Panel’s conclusion that “Infernal’s argument, however, would render the limitations ‘at least a portion of’ in step 1(c) and “said” in step 1(d) superfluous” is another inappropriate claim construction argument.⁵ This again is exemplified by the fact that the Panel cites the holding in *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 962–64 (Fed. Cir. 2006) that “claims are interpreted with an eye toward giving effect to all terms in the claim.” Panel Op. at 7. The Panel stated that “[w]e decline to apply such an interpretation.” *Id.* But the Panel was not charged with the decision whether to do so. The parties already agreed to the open-ended construction of “observer data” as including “at least” the color of objects.

Furthermore, addressing the academic claim construction point discussed in the Panel’s opinion, the agreed construction was entirely proper and does not render any claim language “superfluous.” This is because of the open-ended nature of the construction of “observer data.” Even if the “color of objects” data is used to satisfy

⁵ As discussed above, “said” is an anaphoric phrase that cannot serve as a limitation.

the “combining” step 1(d), this is **not** a “subset” of “observer data” because it includes the “color of objects” data, which is all that is required to qualify as “observer data.” Thus, the agreed-upon open-ended construction of “observer data” does not render as superfluous the “at least a portion of said observer data” language. A “portion of said observed data” can comprise observer data that is part of a collection of observer data including the color of objects but which part does not itself include the color of objects. Thus, Plaintiffs’ infringement theory and evidence, is not consistent with the District Court’s open-ended construction of “observer data.”

F. The Panel’s Reconstruction of the Claim Term “Observer Data” Excludes and Conflicts with Preferred Embodiments

The Panel’s improper and erroneous “reconstruction” of the “observer data” claim language is exemplified by the portion of its opinion discussing “Infernal’s infringement mapping.” Panel Op. at 9. In particular, the Panel asserted that “Infernal’s infringement mapping” regarding the combining step 1(d) “improperly excludes data that is mapped to . . . step 1 (c).” Panel Op. at 9. Specifically, the Panel observed, “[b]y only relying on albedo data to meet “said observer data” in step 1(d), Infernal improperly excludes data [normal vector and position data] that was necessary for Infernal’s infringement mapping for “a portion of said observer data” in step 1(c).” *Id.*

This claim construction argument, however, would exclude the preferred

embodiments in the patent’s specification. *See* Appellants’ Reply Brief at 11 n.3. The preferred embodiment disclosed in the specification does not disclose combining light accumulation buffer data with anything other than just color of objects data, yet they disclose the use of other observer data to perform the comparing step. *See* Abstract (Appx0029). Thus, the “said observer data” in the combining step 1(d) cannot properly be construed or interpreted as including **all** of the observer data that could be provided in step 1(a) and compared in step (c). *See Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed.Cir.2008) (“where claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary.”)

CONCLUSION

The en banc Court should reverse the Panel’s opinion and reverse and vacate the District Court’s decision. In the alternative, the Panel should vacate its opinion and reverse the District Court decision and vacate its judgment.

Dated: February 24, 2023

Respectfully Submitted,

/s/ Eric W. Buether

Eric W. Buether (Lead Counsel)

State Bar No. 03316880

Eric.Buether@BJCIPLaw.com

Christopher M. Joe

State Bar No. 00787770

Chris.Joe@BJCIPLaw.com

Kenneth P. Kula

State Bar No. 24004749

Ken.Kula@BJCIPLaw.com

1700 Pacific Avenue

Suite 4750

Dallas, Texas 75201

Telephone: (214) 466-1271

Facsimile: (214) 635-1827

*Attorney for Plaintiffs-Appellants
Infernal Technology, LLC, Terminal
Reality, Inc.*

ADDENDUM

NOTE: This disposition is nonprecedential.

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

**INFERNAL TECHNOLOGY, LLC, TERMINAL
REALITY, INC.,**
Plaintiffs-Appellants

v.

ACTIVISION BLIZZARD INC.,
Defendant-Appellee

2021-2349

Appeal from the United States District Court for the Northern District of Texas in No. 3:18-cv-01397-M, Chief Judge Barbara M.G. Lynn.

Decided: January 24, 2023

ERIC WILLIAM BUETHER, Buether Joe & Counselors, LLC, Dallas, TX, argued for plaintiffs-appellants. Also represented by CHRISTOPHER MICHAEL JOE, KENNETH PAUL KULA.

JOHN D. GARRETSON, Shook, Hardy & Bacon, LLP, Kansas City, MO, argued for defendant-appellee. Also represented by LAUREN ELIZABETH DOUVILLE, BASIL TRENT WEBB; SHARON A. ISRAEL, DAVID MOREHAN, Houston, TX.

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

CHEN, *Circuit Judge*.

Appellants Infernal Technology, LLC and Terminal Reality, Inc. (collectively, Infernal) sued Defendant-Appellee Activision Blizzard Inc. (Activision) for infringement of two patents related to rendering light and shadow in computer graphics. After the district court issued a claim construction order adopting the parties' agreed-upon construction of the term "observer data," the district court granted Activision's summary-judgment motion of noninfringement. Because the district court properly analyzed the limitation "said observer data" in view of its construction of "observer data" to find that Infernal failed to raise a genuine issue of material fact as to infringement, we *affirm*.

BACKGROUND

I

United States Patent Nos. 6,362,822 ('822 patent) and 7,061,488 ('488 patent) are in the same family and share a specification. Both are entitled "Lighting and Shadowing Methods and Arrangements for Use in Computer Graphic Simulations" and are related to methods of improving how light and shadow are displayed in computer graphics. Claim 1 of the '822 patent recites:

1. A shadow rendering method for use in a computer system, the method comprising the steps of:
 - [1(a)] providing *observer data* of a simulated multi-dimensional scene;
 - [1(b)] providing lighting data associated with a plurality of simulated light sources arranged to illuminate said scene, said lighting data including light image data;

[1(c)] for each of said plurality of light sources, comparing *at least a portion of said observer data* with at least a portion of said lighting data to determine if a modeled point within said scene is illuminated by said light source and storing at least a portion of said light image data associated with said point and said light source in a light accumulation buffer; and then

[1(d)] combining at least a portion of said light accumulation buffer with *said observer data*; and

[1(e)] displaying resulting image data to a computer screen.

'822 patent col. 12 ll. 4–20 (emphases added). The italicized phrases are the focus of this appeal.¹

II

Infernal sued Activision in the Northern District of Texas, alleging that nineteen Activision video games (Accused Games) infringe one or more of claim 1 of the '822 patent and claims 1 and 27 of the '488 patent (collectively, Asserted Claims). *Infernal Tech. LLC v. Activision Blizzard Inc.*, No. 3:18-cv-01397-M, 2021 WL 4391250, at *1, *3 (N.D. Tex. Sept. 16, 2021).

¹ The district court explained that its analysis of steps 1(a), 1(c), and 1(d) in claim 1 of the '822 patent applies equally to all asserted claims because each asserted claim contains these same claim limitations. *Infernal Tech. LLC v. Activision Blizzard Inc.*, No. 3:18-cv-01397-M, 2021 WL 4391250, at *3 n.2 (N.D. Tex. Sept. 16, 2021). Infernal's analysis does the same. Appellants' Br. 18. Thus, our analysis of these steps in claim 1 of the '822 patent applies equally across the asserted claims.

Before the district court, the parties agreed the term “observer data” means “data representing at least the color of objects in a simulated multi-dimensional scene as viewed from an observer’s perspective,” and the district court adopted this construction. *Infernal Tech., LLC v. Activision Blizzard Inc.*, No. 3:18-cv-1397-M, 2019 WL 4247227, at *5, *18 (N.D. Tex. Sept. 6, 2019). Based on the plain and ordinary meaning of the limitation “said observer data” in step 1(d), which incorporates the district court’s construction of “observer data,” Activision moved for summary judgment of noninfringement. *Infernal*, 2021 WL 4391250 at *1, *3–8. The district court granted summary judgment of noninfringement on this basis. *Id.* at *8.

Infernal timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

“We review claim construction based on intrinsic evidence de novo and review any findings of fact regarding extrinsic evidence for clear error.” *SpeedTrack, Inc. v. Amazon.com, Inc.*, 998 F.3d 1373, 1378 (Fed. Cir. 2021) (citation omitted). “[W]e review a district court’s summary judgment ruling under the law of the regional circuit.” *Intell. Ventures I LLC v. Cap. One Fin. Corp.*, 850 F.3d 1332, 1337 (Fed. Cir. 2017) (citation omitted). The Fifth Circuit “review[s] a grant of summary judgment *de novo*, viewing all evidence in the light most favorable to the nonmoving party and drawing all reasonable inferences in that party’s favor.” *Pierce v. Dep’t of U.S. Air Force*, 512 F.3d 184, 186 (5th Cir. 2007) (citation omitted). Summary judgment is proper “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a).

Infernal argues that the district court erred in granting summary judgement of noninfringement by (1) misapplying its own construction of “observer data,” Appellants’ Br. 18–28; and (2) finding that the Accused Games cannot

perform the claimed steps in the specified sequence, *id.* at 28–39. We hold that the district court properly analyzed the limitation “said observer data” in view of its construction of “observer data” to find that Appellants failed to raise a genuine issue of material fact as to infringement.² We first address the court’s analysis of the “observer data” term, followed by the lack of any material factual disputes regarding noninfringement.

I

Although the parties agree on the construction of “observer data,” the parties dispute whether the term “observer data” can refer to *different* data sets in steps 1(a), 1(c), and 1(d) in which each different data set mapped to a given step, when considered in isolation of the other relied-upon data sets, meets the “observer data” construction. *See* Appellants’ Br. 18–22; Appellants’ Reply Br. 1–11. It cannot.

The term “observer data” appears in three steps in claim 1 of the ’822 patent: (1) “providing observer data” in step 1(a); (2) “comparing at least a portion of said observer data” in step 1(c); and (3) “combining . . . with said observer data” in step 1(d). ’822 patent col. 12 ll. 6–19. The parties do not dispute the long-standing principle that “[i]n grammatical terms, the instances of [‘said’] in the claim are anaphoric phrases, referring to the initial antecedent phrase.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008); *see* Appellants’ Br. 23, 32–33; Appellee’s Br. 30–31. Under this principle, the term “said observer data” recited in steps 1(c) and 1(d) must

² Our decision on this argument resolves the parties’ dispute as to noninfringement and renders moot Infernal’s separate argument that the district court erroneously excluded Plaintiffs’ damages expert report. Appellants’ Br. 39–58.

refer back to the “observer data” recited in step 1(a)—i.e., the “observer data” in step 1(a) is the *same* “observer data” in steps 1(c) and 1(d). This conclusion holds even though the district court’s construction of “observer data” is open-ended such that it encompasses “at least color data” as well as other types of data. *See Baldwin*, 512 F.3d at 1342 (“The subsequent use of definite articles ‘the’ or ‘said’ in a claim to refer back to the same claim term does not change the general plural rule [of ‘an’], but simply reinvokes that non-singular meaning.”). Although the initial “observer data” in step 1(a) includes data that is “at least color data,” the use of the word “said” indicates that each subsequent instance of “said observer data” must refer back to the same “observer data” initially referred to in step 1(a). An open-ended construction of “observer data” (“data representing at least the color of objects”) does not permit each instance of “observer data” in a claim to refer to an independent set of data. Thus, the term “observer data” cannot refer to different data among steps 1(a), 1(c), and 1(d).³

³ Our construction of “said observer data” is consistent with other decisions by this court concluding that use of the word “said” or “the” refers back to the initial limitation, even when the initial limitation refers to one or more elements. *See, e.g., Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1356 (Fed. Cir. 1999) (“It is clear from the language of the claim itself that the term ‘a discharge rate’ in clause [b] is referring to *the same* rate as the term ‘the discharge rate’ in clause [d].” (emphasis added)); *Creative Internet Advert. Corp. v. Yahoo!, Inc.*, 476 F. App’x 724, 725–26, 728–29 (Fed. Cir. 2011) (holding that “said end user communication message” required an infringing system to operate on “the same message or messages” recited in prior limitation, even though antecedent phrase was “broad enough to cover multiple messages,”

Infernal argues that “said observer data” in step 1(d) can refer to a narrower set of data than “observer data” in step 1(a) because both independently meet the district court’s construction of “observer data.” Appellants’ Br. 22; Appellants’ Reply Br. 2–3. That argument misunderstands basic claim construction law, as explained above. In addition, step 1(c) recites “*at least a portion of* said observer data,” indicating that the patentee knew how to draft a limitation that refers to a subset of the “observer data.” That the patentee did not claim a subset of “observer data” in step 1(d) indicates that the patentee intended to refer to the same “observer data” in steps 1(a) and 1(d). See *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.” (citations omitted)).

Infernal disagrees, arguing that the presence of “*at least a portion of*” in step 1(c) does not indicate that the “observer data” in step 1(d) refers to *all* the “observer data” from step 1(a) because such a construction ignores the district court’s open-ended construction of “observer data.” Appellants’ Br. 24–26; Appellants’ Reply Br. 10. Infernal’s argument, however, would render the limitations “at least a portion of” in step 1(c) and “said” in step 1(d) superfluous. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 962–64 (Fed. Cir. 2006) (“[C]laims are interpreted with an eye toward giving effect to all terms in the claim.” (citations omitted)). We decline to apply such an interpretation.

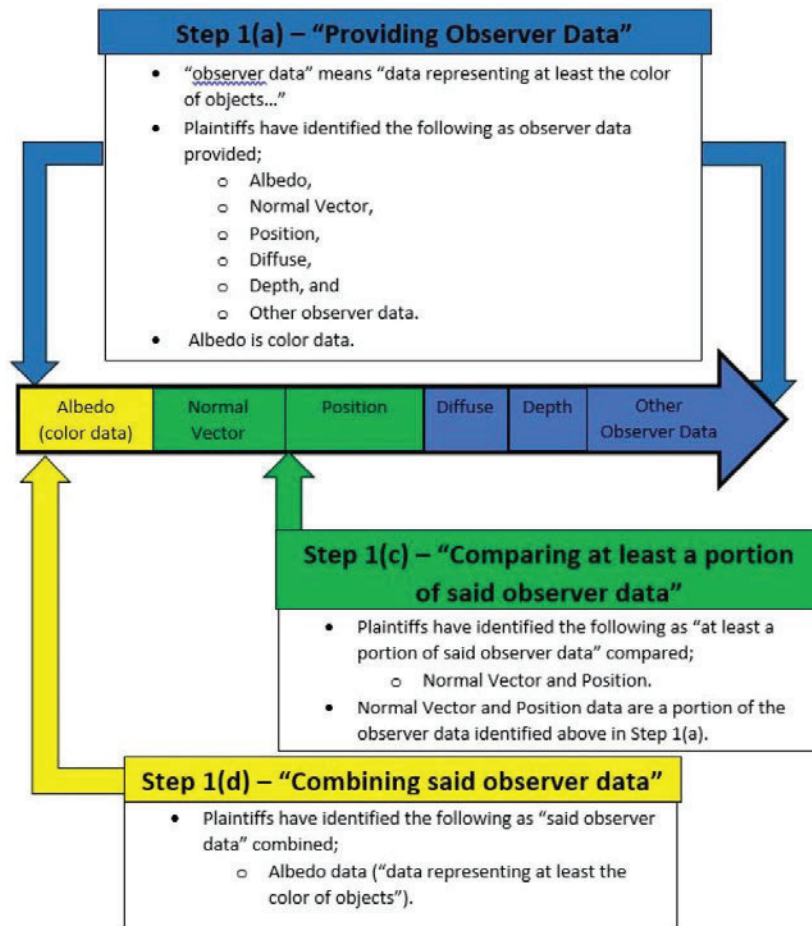
II

Having determined that “said observer data” in step 1(d) must refer to the same “observer data” in step 1(a), we

because a system operating on different messages “would render the word ‘said’ a nullity”).

agree with the district court that Infernal failed to raise a genuine issue of material fact as to the Accused Games performing the limitation “combining . . . with said observer data” in step 1(d).

As shown below, Infernal’s infringement theory maps different sets of data from the Accused Games to the term “observer data” throughout the claim:



Appellants’ Reply Br. 9; *see also* Appellee’s Br. 12–13. For step 1(a), Infernal identifies “observer data” as albedo (color data), normal vector, position, diffuse, depth, and other observer data. However, for step 1(d), Infernal identifies “said observer data” only as albedo (color data).

Because it is undisputed that the mapping of the Accused Games’s “observer data” in step 1(a) is different than the mapping of the “observer data” in step 1(d), we agree with the district court that there is no genuine issue of material fact as to whether the Accused Games infringe the “combining . . . with said observer data” limitation in step 1(d).

Moreover, Infernal’s infringement mapping with respect to step 1(d) improperly excludes data that is mapped to “a portion of said observer data” in step 1(c). For step 1(c), Infernal identifies “a portion of said observer data” as normal vector and position data (shown in the above-figure). So based on its mapping for step 1(c), Infernal’s infringement theory requires “observer data” to—at minimum—include normal vector, position, and albedo (color data). Thus, for example, an internally consistent infringement theory would map: (1) “observer data” in step 1(a) to normal vector, position, and albedo (color data); (2) “a portion of said observer data” in step 1(c) to normal vector and position data; and (3) “said observer data” in step 1(d) to normal vector, position, and albedo (color data). By only relying on albedo data to meet “said observer data” in step 1(d), Infernal improperly excludes data that was necessary for Infernal’s infringement mapping for “a portion of said observer data” in step 1(c).

Because Infernal fails to show a genuine issue of material fact as to whether the Accused Games infringe the “combining . . . with said observer data” limitation in step 1(d), we uphold the district court’s grant of summary judgment.

CONCLUSION

We have considered Infernal’s remaining arguments and find them unpersuasive. For the foregoing reasons, we affirm the district court’s grant of summary judgment of noninfringement.

AFFIRMED

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

CERTIFICATE OF SERVICE

Case Number 2021-2349

Short Case Caption Infernal Technology, LLC, Terminal Teality, Inc., v. Activision Blizzard, Inc.

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on the below individuals at the following locations.

Person Served	Service Location (Address, Facsimile, Email)
John D. Garretson	Shook, Hardy & Bacon, LLP 2555 Grand Boulevard Kansas City, MO 64108; jgarretson@shb.com
Lauren Elizabeth Douville	Shook, Hardy & Bacon, LLP 2555 Grand Boulevard Kansas City, MO 64108; ldouville@shb.com
Sharon A. Israel	Shook, Hardy & Bacon, LLP 600 Travis Street, Suite 3400 Houston, TX 77002; sisrael@shb.com
David Morehan	Shook, Hardy & Bacon, LLP 600 Travis Street, Suite 3400 Houston, TX 77002; dmorehan@shb.com
Basil Trent Webb	Shook, Hardy & Bacon, LLP 2555 Grand Boulevard Kansas City, MO 64108; bwebb@shb.com

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Signature: /s/ Eric W. Buether

Name: Eric w. Buether

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