United States Court of Appeals for the Federal Circuit

INFINITY COMPUTER PRODUCTS, INC.,
Plaintiff-Appellant

v.

OKI DATA AMERICAS, INC.,
Defendant-Appellee

2020-1189

Appeal from the United States District Court for the District of Delaware in No. 1:18-cv-00463-LPS, Chief Judge Leonard P. Stark.

Decided: February 10, 2021

ANDREW DINOVO, DiNovo Price LLP, Austin, TX, argued for plaintiff-appellant. Also represented by NICOLE E. GLAUSER.

MARC ROBERT LABGOLD, Marc R. Labgold, P.C., Reston, VA, argued for defendant-appellee. Also represented by PATRICK J. HOEFFNER; JEFFREY T. CASTELLANO, ANDREW E. RUSSELL, JOHN W. SHAW, Shaw Keller LLP, Wilmington, DE.

Before PROST, *Chief Judge*, CLEVENGER and TARANTO, *Circuit Judges*.

PROST, *Chief Judge*.

Infinity Computer Products, Inc. ("Infinity") appeals the U.S. District Court for the District of Delaware's final judgment of invalidity. We agree with the district court that the patent claims asserted by Infinity against Oki Data Americas, Inc. ("Oki Data") are indefinite. We therefore affirm.

BACKGROUND

I

Infinity sued Oki Data for infringing four related patents: U.S. Patent Nos. 6,894,811 ("the '811 patent"), 7,489,423, 8,040,574, and 8,294,915.[1] The patents share a specification and involve using a fax machine as a printer or scanner for a personal computer. The indefiniteness issues in this case revolve around the connection between the fax machine and the computer, termed a "passive link." The parties agree that claim 1 of the '811 patent is representative. That claim states:

> 1. A method of creating a scanning capability from a facsimile machine to a computer, with scanned image digital data signals transmitted through a bi-directional direct connection *via a passive link between the facsimile machine and the computer*, comprising the steps of:

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[1] Infinity asserted claims 1–2, 4, 6–7, and 18–20 of the '811 patent; claims 1–4 and 6 of U.S. Patent No. 7,489,423; claims 1–2, 4–5, and 7–8 of U.S. Patent No. 8,040,574; and claims 1, 6–9, and 14–15 of U.S. Patent No. 8,294,915.

> by-passing or isolating the facsimile machine and the computer from the public network telephone line;
>
> coupling the facsimile machine to the computer;
>
> conditioning the computer to receive digital facsimile signals representing data on a scanned document; and
>
> conditioning the facsimile machine to transmit digital signals representing data on a scanned document to the computer, said computer being equipped with unmodified standard protocol send/receive driver communications software enabling the reception of scanned image signals from the facsimile machine, said transmitted digital facsimile signals being received directly into the computer through the bi-directional direct connection *via the passive link*, thereafter, said computer processing the received digital facsimile signals of the scanned document as needed.

'811 patent claim 1 (emphases added).

The '811 patent is a continuation-in-part of U.S. Patent App. No. 08/226,278 ("the '278 application"), which itself ultimately issued as U.S. Patent No. 5,530,558. The "principal object" of the claimed invention is "to provide a circuit for interfacing a PC and a facsimile to enable the facsimile to be utilized as a scanner or a printer for a PC and to accomplish all of the objectives of a scanner or a printer in a simple straightforward manner through the use of a circuit of highly simplified design and low cost." '811 patent col. 1 ll. 39–45; *see id.* Fig. 1 (circuit diagram).

Figures 2a–e of the '811 patent depict this circuit relative to a computer and a fax machine. They also depict "facsimile modem circuitry," which "may be either internal or external" to the computer. *Id.* at col. 6 ll. 3–5.

Figures 2b–d, for example, depict a fax machine connected to a computer via an RJ-11 cable, with fax modem circuitry located internal to the computer.

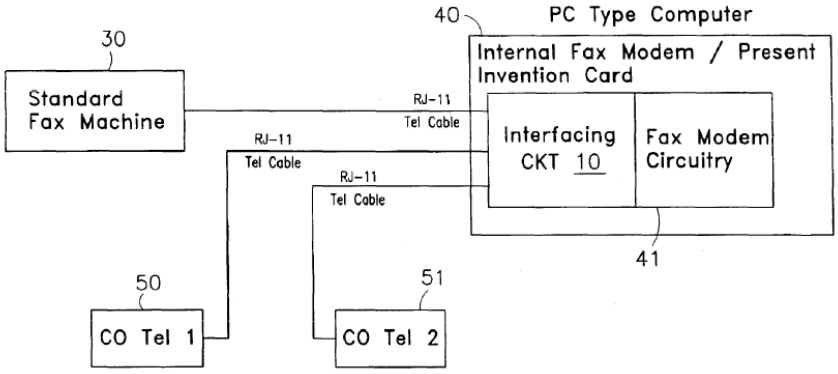

Fig. 2b

Id. Fig. 2b.

Figures 2f–h do not show fax modem circuitry interposed between the fax machine and the computer. Nor do they depict it as internal to the computer. The arrangement of Figure 2f, for example, "is used with PC's which do not have a fax modem installed." *Id.* at col. 6 ll. 62–63. This figure depicts a fax machine connected to a computer via an RS-232 cable, with both the circuit of the invention and the fax modem circuitry residing in the fax machine.

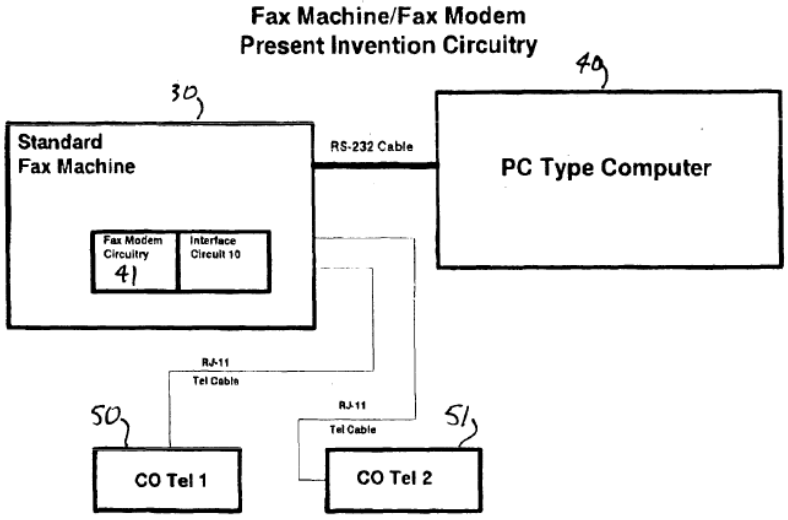

Fig. 2f

Id. Fig. 2f. Unlike Figures 2a–e, Figures 2f–h were not disclosed in the parent '278 application.

II

The term "passive link" does not appear in the '811 patent specification. Nor does it appear in the parent '278 application. Rather, Infinity first introduced the term during prosecution of the '811 patent to distinguish an anticipating prior-art reference—U.S. Patent No. 5,452,106 ("Perkins"). This reference, the patent examiner noted, discloses using a fax machine as a scanner or printer for a computer. J.A. 2129–30.

Infinity's initial attempts at distinguishing Perkins were unsuccessful. First, Infinity amended the claim to recite (among other things) data transfer "between the facsimile machine and the computer" that occurs "without interruption." J.A. 1227. Infinity also distinguished Perkins at length in accompanying remarks, on the ground

that Perkins includes an intervening component—"device 3"—between the fax machine and the computer. J.A. 1233–36. As Infinity noted, one function of device 3 was to serve as a fax modem. J.A. 1233.

Infinity asserted that, "[u]nlike Perkins," the claimed invention permits "the uninterrupted transfer of scanning or printing signals *between* the facsimile and the computer without the use of intervening circuitry, and does not intercept the signals for demodulation as Perkins does with device 3." J.A. 1234. Later in the same response, Infinity reiterated that its invention "does not require a microprocessor or *any circuitry or software to interrupt and intercept* the signals which occur in transmissions between a fax machine and a computer." J.A. 1235.

The examiner was not persuaded. Perkins's device 3, the examiner countered, "may be provided on a card for location in the computer." J.A. 3443. This internal-card embodiment, the examiner continued, represents an "uninterrupted" connection between the fax machine and the computer that defeats Infinity's distinction. J.A. 3443.

Infinity responded with further amendments and remarks in several subsequent responses, including by repeating the "intervening circuitry" distinction. Eventually, Infinity overcame Perkins by amending the claim to require a "passive link" between the fax machine and the computer and by using this new term as a hook for its intervening-circuitry distinction:

> The Applicant *creates a passive link* between the facsimile machine and the computer in order to accommodate the signal transfer for printing or scanning. Therefore, the Applicant *does not require any intervening apparatus* as does Perkins. The applicant therefore believes[] Perkins did not anticipate the methods used by the Applicant.

J.A. 2196 (emphases added). In support, Infinity emphasized that Perkins requires an intervening modem:

> Perkins'[s] device 3 or card design requires a modem to be integrated into it in order to transfer signals for scanning or printing as part of his computer and facsimile transceiver interface. In contrast, the Applicant can transfer digital signals between the facsimile transceiver and the computer without the need for a modem at the computer interface.

J.A. 2197. In doing so, Infinity relied on its more recent Figures 2f–h, which do not depict a fax modem between the fax machine and the computer. J.A. 2198 ("[A] modem is not required at the computer in Figures 2F, 2G, and 2H.").

Infinity also reprised its argument that Perkins's device 3 is intervening circuitry between the fax machine and the computer—even when placed internally. This is so, Infinity contended, because device 3 intercepts data before it reaches the I/O bus of the computer:

> In [Perkins's] internal configuration, facsimile transmission data never enters the computer I/O Bus until after it is processed by the device 3 card circuits into digital data, thereafter, the flow of data transfers to the I/O Bus and is processed by the computer circuitry.
>
> It is therefore evident that Perkins'[s] device 3 intercepts the flow of data before it is transmitted to the computer circuits, in order to convert the analog signal into a digital signal format acceptable to the computer. Hence, even though circuitry of device 3 is placed in a card within the box containing the computer *it should be regarded as a peripheral device to the computer which processes data before it is transmitted to the I/O bus of the computer*.

J.A. 2201 (emphasis added).

Unlike Perkins's internal-card embodiment, Infinity argued, the claimed "passive link" conveys data directly to the I/O bus of the computer without intervening circuitry:

> Contrary to the above, when the Applicant transfers digital data from the facsimile transceiver *through a passive link* for scanning to the computer, the non-intercepted data enters through the RS 232 type connector port of the computer and *passes directly to the I/O Bus and is processed by the receiving circuits* (i.e., UART, CPU) *of the computer*, providing a true non intercepted digital signal between the facsimile transceiver and the computer.
>
> In effect, the Applicant's method does not use intermediary peripheral circuitry for signal interception, resulting in demodulation or modulation which is required by Perkins with his card or device 3.

J.A. 2201 (emphases added). This time, Infinity's argument was successful, and the '811 patent issued after further prosecution.

III

The '811 patent was later the subject of three ex parte reexaminations. In one of these, Infinity sought to antedate a reference, U.S. Patent No. 5,900,947 ("Kenmochi"), by arguing that claim 1 of the '811 patent is entitled to the priority date of the '278 application. Specifically, as Infinity recounted in summarizing an examiner interview, Infinity asserted that "the RJ-11 telephone cable shown in Figs. 2b, 2c and 2d of the ['278 application] is the 'direct' and 'passive link.'" J.A. 2500. Infinity made this argument even though each of Figures 2b–d depicts internal fax modem circuitry like Perkins's internal-card embodiment.

Likewise, in its written response to the Kenmochi rejection, Infinity argued that "the RJ 11 telephone cable and

use thereof in communicating data between the fax machine 30 and the PC computer 40 meets the . . . definition of 'passive link.'" J.A. 2377–78. "For example, with respect to Figures 2b–2d" of the '278 application, Infinity argued, "the RJ 11 telephone cable connects the fax machine 30 to the PC computer 40 such that there is no intervening apparatus or signal interception by a processing element or any active component, along the path of an unbroken direct connection between the PC and the facsimile machine." J.A. 2378 (internal quotation marks omitted). Along the way, Infinity acknowledged that "[t]he term 'passive link' was first introduced in an amendment . . . to distinguish the invention of the ['811 patent] from Perkins." J.A. 2377.

Infinity also submitted an expert declaration during the reexamination. Without addressing the prior distinction of Perkins, Infinity's expert witness likewise opined that Figures 2b–d of the '278 application disclose a "passive link." J.A. 1980. He added that "the use of a modulation procedure within the PC and facsimile machine as shown in the figures does not insert an intervening apparatus or processing element along the path, e.g. on the cable between the PC's RJ-11 and the fax's RJ-11." J.A. 1980.

The examiner accepted Infinity's argument without expressly addressing Infinity's prior distinction of Perkins, J.A. 2525–29, despite recognizing in an interview summary that "the 'passive link' limitation" was a basis on which Infinity overcame "rejections based on Perkins" during prosecution. J.A. 1992. After further proceedings, including an appeal to the Patent Trial and Appeal Board ("Board"), a reexamination certificate ultimately issued noting the patentability of the claims.

IV

In this case, Oki Data argued before the district court that the terms "passive link" and "computer" are indefinite because Infinity took conflicting positions on the endpoint of the "passive link" during prosecution. In particular, Oki

Data argued that Infinity took one position to overcome Perkins and a different position to antedate Kenmochi—creating uncertainty as to where the "passive link" ends and where the "computer" begins. At the *Markman* hearing, Infinity acknowledged that one of ordinary skill would need to be reasonably certain where the passive link ends and the computer begins in order for the claims to be definite. *Infinity Comput. Prods., Inc. v. Oki Data Ams., Inc.*, No. 18-463, 2019 WL 2422597, at *4 (D. Del. June 10, 2019), *reconsideration denied*, 2019 WL 5213250 (D. Del. Oct. 16, 2019).[2]

The district court agreed with Oki Data that "passive link" and "computer" are indefinite. First, the court explained that Infinity had taken materially inconsistent positions regarding the extent of the claimed "passive link"—specifically, whether it ends at the I/O bus inside the computer (as argued to distinguish Perkins) or merely at the computer's port (as argued to antedate Kenmochi). *Id.* at *4–6. Therefore, the court concluded, the endpoint of "passive link" is not reasonably certain and the term is indefinite. *Id.*

Second, the court reasoned that because there is not reasonable certainty about where the "passive link" ends, there also cannot be reasonable certainty about where the "computer" begins. *Id.* at *6. "Specifically, where the passive link ends at a computer port, the computer begins at the port, and where the passive link ends at the I/O bus, the computer begins at the I/O bus." *Id.* The court denied Infinity's motion for reconsideration and entered a final judgment of invalidity. *Infinity*, 2019 WL 5213250, at *1–

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[2] *Markman* Tr. 61:19–22, J.A. 3855 (The Court: "In order for these claims to be definite, does one of skill in the art have to be reasonably certain where the passive link ends and the computer begins?" Mr. DiNovo: "Yes.").

2; J.A. 22. This appeal followed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

I

"The Patent Act requires that a patent specification 'conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the applicant regards as [the] invention.'" *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014) (alteration in original) (quoting 35 U.S.C. § 112, ¶ 2 (2006)). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.* This standard strikes the "delicate balance" of accounting for both "the inherent limitations of language" and the need to "afford clear notice of what is claimed, thereby apprising the public of what is still open to them." *Id.* at 909 (cleaned up). It also serves as a "meaningful . . . check" against "foster[ing] [an] innovation-discouraging 'zone of uncertainty.'" *Id.* at 910–11 (quoting *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942)).

Indefiniteness is ultimately a question of law that we review de novo. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). "[W]e look to the patent record—the claims, specification, and prosecution history—to ascertain if they convey to one of skill in the art with reasonable certainty the scope of the invention claimed." *Id.* "The prosecution history 'consists of the complete record of the proceedings before the PTO,'" including reexamination proceedings. *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1341 (Fed. Cir. 2014) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc)); *see also Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1266 (Fed. Cir. 2012) ("A patentee's statements during reexamination can be considered during

claim construction."). And "[a] statement made during prosecution of related patents may be properly considered in construing a term common to those patents." *Teva*, 789 F.3d at 1343.

Indefiniteness may result from inconsistent prosecution history statements where the claim language and specification on their own leave an uncertainty that, if unresolved, would produce indefiniteness. In *Teva*, for example, we concluded that the term "molecular weight" was indefinite. The parties had agreed that the term could refer to any of three different measures that are calculated in different ways and that typically yield materially different results. *Id.* at 1341. Neither the claim language nor the specification indicated which measure the claims covered. *Id.* The prosecution history did not answer the question. To the contrary, in the prosecution histories of two continuation applications with nearly identical specifications, the patentee defined the term in two different ways—in each case to successfully overcome a rejection. *Id.* at 1343–45. On that record, we concluded that the term was indefinite. *Id.* at 1345. The record here is similar. As with the term "molecular weight" in *Teva*, the claim language and specification do not provide reasonable certainty about a crucial aspect of "passive link," namely, where it ends. And far from resolving the uncertainty during prosecution, Infinity took conflicting positions during prosecution regarding the scope of "passive link."

At first, Infinity argued that a "passive link" does not allow for intervening circuitry, like a fax modem, between the fax machine and the I/O bus of the computer. At the time, Infinity asserted that even circuitry "within the box containing the computer," like Perkins's device 3, "should be regarded as a peripheral device to the computer which processes data before it is transmitted to the I/O bus of the computer." J.A. 2201. Unlike Perkins, Infinity argued, data transmitted "through a passive link . . . passes directly to the I/O Bus and is processed by the receiving

circuits . . . of the computer." J.A. 2201. On its own, this position would lead one of ordinary skill to believe a passive link does not end at the computer's port but rather reaches to the I/O bus of the computer—especially "[g]iven the role of the statement in gaining allowance of the claims," *Teva*, 789 F.3d at 1344.

Later, Infinity reversed course. During reexamination, Infinity contended that the passive link was coextensive with the RJ-11 cable in the embodiments of Figures 2b–d—embodiments which *do* include intervening circuitry (such as fax modems) between the fax machine and the computer's I/O bus—indeed, within the "box containing the computer" like Perkins's device 3. On its own, this argument would lead one of ordinary skill to believe a "passive link" ends at the computer's port.

The public-notice function of a patent and its prosecution history requires that we hold patentees to what they declare during prosecution. *Teva*, 789 F.3d at 1344. But holding Infinity to both positions results in a flat contradiction, providing no notice to the public of "what is still open to them." *Nautilus*, 572 U.S. at 909. Here, one of ordinary skill cannot determine with any reasonable certainty, for instance, whether or not the claims cover arrangements like the internal-card embodiment of Perkins and the internal-modem embodiments of Figures 2b–d. On the record before us, therefore, we agree with the district court that the intrinsic evidence leaves an ordinarily skilled artisan without reasonable certainty as to where the passive link ends and where the computer begins.

II

Infinity's contrary arguments are unavailing. Before the district court and on appeal, Infinity advanced its reexamination interpretation—i.e., that the passive link ends (and the computer begins) at the computer's port. But as the district court recognized, such an interpretation contradicts Infinity's distinction of Perkins—in which Infinity

called Perkins's device 3 an intervening apparatus even though it was internal to the computer. *Infinity*, 2019 WL 5213250, at *1 ("Thus, if the 'passive link' ends at a computer *port* and not at the computer's I/O bus, as Infinity now suggests, Perkins would include a 'passive link,' rendering the patentee's distinction from Perkins nugatory.").

Infinity argues that the court misinterpreted its statements distinguishing Perkins. According to Infinity, the passive link is the physical cable spanning the fax machine and the computer and Infinity's prosecution statements should be interpreted to mean that the data flowing through the passive link, rather than the passive link itself, proceeds uninterrupted to the I/O bus. But "we hold patentees to the actual arguments made, not the arguments that could have been made" during prosecution. *Tech. Props. Ltd. LLC v. Huawei Techs. Co.*, 849 F.3d 1349, 1359 (Fed. Cir. 2017). And the Supreme Court has warned us against "viewing matters *post hoc*" to "ascribe *some* meaning to a patent's claims." *Nautilus*, 572 U.S. at 911–12. Here, Infinity stated that the passive link is the reason why its invention requires no intervening apparatus. J.A. 2196 ("The Applicant creates a passive link . . . . Therefore, the Applicant does not require any intervening apparatus as does Perkins."). To distinguish Perkins's internal-card embodiment, the passive link could not be merely a cable that ends at the computer's port.

Infinity has also at various points relied on an express definition of "passive link" that it presented to the Patent Office. Infinity first offered this definition in response to a rejection that came after Perkins was withdrawn, and later again through its expert witness during reexamination and before the Board.[3] The definition provides:

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[3] Infinity's appeal to the Board concerned whether the '278 application supports claims reciting digital-signal

> [A] "passive link" is one where the initiation of data flow is activated from a set-up procedure within the PC and/or the facsimile machine, and said data is transferred, with no intervening apparatus or signal interception by a processing element or any active component, along the path of an unbroken direct connection between the PC and the facsimile machine, for purposes of providing both scanning or printing data.

J.A. 1784. This is no help. According to this definition, a passive link is "one" characterized by the properties described. The definition, therefore, does not resolve the point in question: the extent of the "link."

Additionally, Infinity emphasizes that it submitted "unrebutted expert testimony" to the district court. Yet the testimony Infinity submitted merely states that "passive link" needs no construction and, in the alternative, that it should be construed according to the unhelpful definition above. J.A. 2975–76. And, as Oki Data notes, that testimony repeats the very same statements made during reexamination that gave rise to the inconsistency in the first place. Infinity's contradictory positions are plain from the patent record. The district court therefore saw no need for extrinsic evidence, and neither do we. *See Teva*, 789 F.3d at 1342 ("The internal coherence and context assessment of the patent, and whether it conveys claim meaning with reasonable certainty, are questions of law.").

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transmission. J.A. 3281. In passing, the Board described Figures 2b–d of the '811 patent as depicting a passive link—i.e., "the RJ-11 telephone cable"—based on the definition that Infinity's expert witness proffered. J.A. 3284. The Board's only mention of Perkins related to Infinity's prosecution argument that Perkins disclosed an analog-only configuration. J.A. 3287.

We also reject Infinity's argument that the district court should not have held the claims indefinite based on a "single statement." *E.g.*, Appellant's Br. 50–53. As an initial matter, we disagree that the court did so. As discussed above, Infinity repeatedly made the distinction that was eventually successful in overcoming Perkins. Moreover, as Oki Data points out, a single contradictory statement was sufficient in *Teva*. Indeed, we noted there that we hold patentees even to erroneous prosecution statements. *Teva*, 789 F.3d at 1344.

Further, it is immaterial that Infinity also distinguished Perkins on another ground—i.e., that Perkins discloses an analog-only arrangement. *See, e.g.*, *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1374 (Fed. Cir. 2007) ("An applicant's invocation of multiple grounds for distinguishing a prior art reference does not immunize each of them from being used to construe the claim language."). Infinity admits that it made both distinctions during prosecution. Reply Br. 20. And, for what it's worth, Infinity commented in an interview during reexamination that "the examiner did not find the analog versus digital signal argument persuasive." Reply Br. 20; J.A. 1992.

We also disagree that the presence of the term "computer interface" in the claim at the time of the Perkins distinction somehow harmonizes Infinity's inconsistent statements. As the district court explained, the claim at the time also recited "a passive link . . . from the facsimile machine to the computer." *Infinity*, 2019 WL 5213250, at *2 (alteration in original). And Infinity "did not make any mention of, let alone place any material significance on, the phrase 'computer interface' in its distinction of the claimed invention's 'passive link' from the connection in Perkins." *Id.*

Last, Infinity argues that "computer" is a familiar term with a well-understood ordinary meaning. We recognize

that, in a vacuum, it might seem odd to hold "computer" indefinite. We also recognize that the specification identifies examples of commercial computers, such as an "Apple Macintosh" and an "IBM PC." '811 patent col. 4 ll. 64–66. Yet the indefiniteness here does not reside in the term "passive link" or "computer" on its own but rather in the relationship between the two in the context of these claims.[4] And any resulting strangeness stems from Infinity's own statements. *See, e.g.*, J.A. 2201 ("[E]ven though circuitry of device 3 is placed in a card within the box containing the computer[,] it should be regarded as a peripheral device to the computer."). As already noted, Infinity agrees that one of ordinary skill would need to be reasonably certain where the passive link ends and where the computer begins. There is no reasonable certainty as to that boundary. We therefore agree with the district court that both terms are indefinite.

III

We have considered Infinity's remaining arguments and find them unpersuasive. The district court correctly concluded that the asserted claims are invalid for indefiniteness. We affirm.

AFFIRMED

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[4] *See Markman* Tr. 49:19–25, J.A. 3843 (Mr. Labgold: "[W]e all know what a computer is. That is not what the issue is. It's the way that it is being used and how it has been differentiated with regard to the passive link.").