

NOTE: This disposition is nonprecedential.

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

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**VIA VADIS, LLC, AC TECHNOLOGIES S.A.,**  
*Plaintiffs-Appellants*

v.

**BLIZZARD ENTERTAINMENT, INC.,**  
*Defendant-Appellee*

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2019-2269

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Appeal from the United States District Court for the  
Western District of Texas in No. 1:14-cv-00810-LY, Judge  
Lee Yeakel.

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**VIA VADIS, LLC, AC TECHNOLOGIES S.A.,**  
*Plaintiffs-Appellants*

v.

**AMAZON.COM, INC.,**  
*Defendant-Appellee*

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2019-2270

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Appeal from the United States District Court for the Western District of Texas in No. 1:14-cv-00813-LY, Judge Lee Yeakel.

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Decided: July 8, 2020

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ANDREW DiNOVO, DiNovo Price LLP, Austin, TX, argued for plaintiffs-appellants.

NATHAN K. KELLEY, Perkins Coie, LLP, Washington, DC, argued for defendants-appellees. Also represented by DAN L. BAGATELL, Hanover, NH; DANIEL T. SHVODIAN, WING LIANG, Palo Alto, CA.

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Before DYK, WALLACH, and CHEN, *Circuit Judges*.

CHEN, *Circuit Judge*.

Via Vadis, LLC and AC Technologies S.A. (collectively, Via Vadis) appeals a decision of the U.S. District Court for the Western District of Texas finding the claim term “pre-specified parameters” in U.S. Patent No. RE40,521 (’521 patent) indefinite, thereby rendering the asserted claims invalid under 35 U.S.C. § 112, ¶ 2.<sup>1</sup> For the reasons that follow, we affirm-in-part and reverse-in-part.

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<sup>1</sup> Paragraph 2 of 35 U.S.C. § 112 was replaced by § 112(b) when the Leahy-Smith America Invents Act (AIA), Pub. L. No. 112–29, 125 Stat. 284 (2011) took effect on September 16, 2012. Because the application resulting in the ’521 patent was filed before that date, we refer to the pre-AIA version of § 112.

## BACKGROUND

The '521 patent generally describes a system and method for optimizing access to data in a distributed network. The '521 patent identifies a number of problems with prior art distributed network computer systems where individual clients across a network seek access to data stored on a server. '521 patent col. 1 ll. 32–67. For example, unwanted transmission “lags” between the server and clients can occur “in part because the connection quality to the clients varies e.g. due to various distances between the server and the clients as well as different transmission performances in various areas of the network.” *Id.* at col. 1 ll. 57–67. The patent claims to solve these problems by redundantly storing the same data in multiple, differently located “data storage means.” *Id.* at col. 2 ll. 24–30. Then, based on “prespecified parameters of the data transmission” between each of the data storage means and the client computer requesting the data, one of the data storage means redundantly storing the requested data transmits the data to the client, “as a function of the determined prespecified parameters.” *Id.* “Preferably, these prespecified parameters comprise the duration of transmission, and/or the fault rate, and/or the duration of data processing operations of the individual computer units, and/or the individual users prior to the transmission of the data.” *Id.* at col. 4 ll. 20–24. With this design, according to the '521 patent, transmission of requested data is “carried out more rapidly involving fewer faults.” *Id.* at col. 2 ll. 30–34. In addition, the specification describes each data storage means as comprising a “cluster” of “cells,” with each cell storing a field of data. *Id.* at col. 7 ll. 26–35. In accordance with the invention, each field of data is redundantly stored in different cell clusters. *Id.* at col. 8 ll. 65–67.

Claim 1 is representative:

1. A data access and management system for a computer system, comprising:

at least two data storage means;

at least one computer unit which accesses the data of the data storage means;

data transmission means for a data transmission between the data storage means and the computer unit, with the data being stored in a redundant manner in at least two of the at least two data storage means; and

means for detecting prespecified parameters of the data transmission between the data storage means and the computer unit, with data being preferably stored in a redundant manner in the data storage means as a function of said detected prespecified parameters, and with the computer unit accessing one of the data storage means as a function of said detected prespecified parameters, the data storage means comprising a second means for detecting prespecified parameters for data transmissions between said data storage means; and

wherein the data storage means copies data which is redundantly stored in the system independent of an access of the computer unit as a function of the detected prespecified parameters for data transmissions between said data storage means.

*Id.* at claim 1. The '521 patent's other independent claim, claim 30, is similar to system claim 1, except written as a method claim. *Id.* at claim 30.

On August 22, 2014, Via Vadis filed complaints against Blizzard Entertainment, Inc. and Amazon.com, Inc. (collectively, Blizzard) asserting infringement of claims 1, 4, 11–18, 20–22, 30–31, 33, and 40–46 of the '521 patent at the

district court.<sup>2</sup> On August 25, 2015, Blizzard filed a petition for inter partes review (IPR) of the '521 patent claims asserted at the district court litigation. On March 8, 2016, the Patent Trial and Appeal Board (Board) instituted IPR of the '521 patent with respect to method claims 30, 31, 33, and 40–46. J.A. 2016–30. As to system claims 1, 4, 11–18, and 20–22, however, the Board did not institute IPR because the specification lacks sufficient corresponding structure for the means-plus-function limitation “second means for detecting,” thus preventing the Board from being able to interpret the scope of claim 1. *Id.* at 2029.

On September 20, 2016, the district court issued its claim construction order finding the claim term “prespecified parameters,” which is recited in both claims 1 and 30, indefinite. *Id.* at 26. The district court also found “means for detecting prespecified parameters of the data transmission between the data storage means and the computer unit” and “second means for detecting prespecified parameters for data transmissions between said data storage means” not indefinite based on its view that the specification disclosed an algorithm that corresponded to both means-plus-function limitations. *Id.* at 27–32. On March 6, 2017, the Board issued its final written decision finding Blizzard had failed to meet its burden of proving claims 30–31, 33, and 40–46 unpatentable. *Id.* at 1584–1607. On April 22, 2019, Via Vadis moved the district court to reconsider its finding of the claim term “prespecified parameters” as indefinite in light of the Board’s institution of IPR and final written decision. *Id.* at 1569–82. On July 9, 2019, the district court denied Via Vadis’s motion for reconsideration, reaffirmed its finding that the asserted claims of the '521 patent are invalid as indefinite, and entered judgment in Blizzard’s favor. *Id.* at 1–7. Via Vadis timely appealed

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<sup>2</sup> Via Vadis also asserted infringement of a number of other patents not relevant to this appeal.

to our court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

The ultimate conclusion that a claim is indefinite under 35 U.S.C. § 112, ¶ 2 is a legal conclusion which we review de novo. *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1364 (Fed. Cir. 2015). We review a district court's underlying factual determinations for clear error. *Id.* “[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.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). “Reasonable certainty” does not require “absolute or mathematical precision.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1381 (Fed. Cir. 2015) (internal quotation marks omitted).

We review a district court's ruling on a motion for reconsideration under the law of the regional circuit. *Del. Valley Floral Grp., Inc. v. Shaw Rose Nets, LLC*, 597 F.3d 1374, 1379 (Fed. Cir. 2010). The Fifth Circuit reviews a district court's grant or denial of a motion for reconsideration for abuse of discretion. *Anderson v. Argent Mortg. Co.*, 692 F. App'x 769, 770 (5th Cir. 2017).

#### I. Prespecified parameters

The district court concluded that the claim term “prespecified parameters” is indefinite because “there is no explanation in the text of the Asserted Patents from which to determine what event, action, or condition in advance of which the parameters of data transmission must be chosen in order to satisfy the claim.” J.A. 26. In other words, the district court's concern with the claim term boils down to the meaning of “prespecified”—the court could not discern in advance of what event or action the parameters must be specified. For the reasons that follow, we conclude that the

meaning of “prespecified parameters” is reasonably ascertainable in the context of this patent and refers to parameters specified in advance of a data transmission.

“[C]laim construction must begin with the words of the claims themselves.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 457 F.3d 1293, 1301 (Fed. Cir. 2006). Claim 1 uses “prespecified parameters” as follows:

means for detecting *prespecified parameters* of the data transmission between the data storage means and the computer unit, with data being preferably stored in the data storage means as a function of said detected *prespecified parameters*, and with the computer unit accessing one of the data storage means as a function of said detected *prespecified parameters* . . .

wherein the data storage means copies data which is redundantly stored in the system independent of an access of the computer unit as a function of the detected *prespecified parameters* for data transmissions between said data storage means.

’521 patent claim 1 (emphases added). Similarly, claim 30 uses “prespecified parameters” as follows:

accessing the stored data by at least one computer unit via data transmission means, with *prespecified parameters* of the data transmission between the data storage means and the computer unit being determined, the data being stored in a redundant manner in at least two of the at least two data storage means as a function of the determined *prespecified parameters* of the data transmission, the access to the data being effected as a function of the determined *prespecified parameters* of the data transmission . . .

*Id.* at claim 30 (emphases added). The claims on their face require the data be both stored and then accessed for

transmission “as a function of the detected [or determined] prespecified parameters.” Consideration of the parameters relevant to a particular cell is therefore necessary before selecting a particular cell for storing data in that cell as well as transmitting data to a client from that cell. Thus, in the context of the claims, the parameters logically must be specified prior to the transmission of data.

A skilled artisan is deemed to read a claim term not only in the context of the particular claim, but in the context of the entire patent, including the specification. *Philips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc); see also *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) (“[T]he specification is always highly relevant to the claim construction analysis and is, in fact, the single best guide to the meaning of a disputed term.” (internal quotations and citation omitted)). According to the specification, the patented invention’s purpose is to optimize the speed and reliability of data transmission, and it achieves this by first (1) redundantly storing data in different data storage locations and then (2) using parameters associated with each location (i.e., cell) to assess which location will most rapidly and reliably deliver the desired data to a requesting client. The ’521 patent’s specification contains a number of references to prespecified parameters:

Further it is to be preferred that the determination of the prespecified parameters of data transmissions between the individual data storage means and the computer unit comprises the determination of the duration of the transmission, and/or the fault rate, and/or the duration of data processing operations of the individual data storage means prior to the transmission of the data in order to access data more rapidly and/or reliably.

’521 patent col. 5 ll. 27–35; see also *id.* at col. 3 ll. 39–47, col. 4 ll. 16–24 (“Preferably, these prespecified parameters



comprise the duration of the transmission, and/or the fault rate, and/or the duration of the data processing operations of the individual computer units and/or the individual users prior to the transmission of data.”). Reviewing these passages and understanding the express purpose of the invention, a skilled artisan would understand that the parameters are specified in advance of a given data transmission, as they are employed to select the source of that data transmission. In other words, knowledge of the parameters is needed *before* the system can select an optimal data source, and thus the parameters must be specified, that is, available and on-hand, before the transmission of the data.

Blizzard, for its part, contends that the above-quoted passages’ usage of permissive terms such as “[p]referably” and “it is to be preferred” suggests that the patent does not necessarily require the “prespecified parameters” to be specified “prior to the transmission of data,” thereby making the meaning of “prespecified” unclear. Appellees’ Br. at 26–28. We disagree. The far better reading of these permissive terms is that they refer to the disclosed preferred, non-limiting list of types of parameters that can be used with the invention, like the duration of the transmission, and are not applicable to *when* the parameters are specified. Nowhere in the specification does the patent suggest specifying the parameters during a transmission or after a transmission. Nor would it be logical to do so where those parameters are needed for the determination of which cell or data storage means will be accessed for a data transmission. For the same reason, we disagree with Blizzard’s view that “prior to the data transmission” modifies only the last identified parameter in the disclosed list. *See, e.g., id.* at col. 3 ll. 39–47 (listing prespecified parameters as “duration of the transmission, and/or the fault rate, and/or the duration of data processing operations of the individual data storage means prior to the transmission of the data”). The more reasonable interpretation of these passages is

that this phrase conveys that each of the identified parameters is “prespecified” prior to a data transmission. For example, a prespecified parameter could be the fault rate determined prior to the transmission of the data.

To the extent Blizzard further argues that “prespecified” is unclear because the patent fails to require a precise moment in time the parameters are specified, we find that argument lacks merit. Precisely when the parameters are specified is unimportant so long as they are specified in advance of data transmission. The specification in fact explains how the parameters can be updated periodically when a given cell’s recent performance provides more information related to its data transmission parameters. *See id.* at col. 9 ll. 25–37. To update and further optimize the parameters, a skilled artisan would understand that the parameters would have to be known prior to the transmission of data and that the parameters are not required to be static values generated at a single fixed time.

As to Blizzard’s argument that the term “prespecified parameters” is indefinite because neither the claims nor the specification explains how the data transmission parameters are specified or who or what specifies those parameters, we see no reason why in the context of this patent such details are needed to understand the scope and meaning of the disputed claim term. In our view, this argument sounds more like a potential enablement question than an indefiniteness problem. Blizzard does not cite any analogous cases, nor are we aware of any, to support its proposition that to reasonably discern the meaning of “prespecified parameters” in this case, a skilled artisan would have to know not only what they are, but also know specifically how they are generated. Via Vadis, on the other hand, relies on a case that we believe is consistent with our ruling here. *See IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109 (Fed. Cir. 2011). In *IGT*, we analyzed the phrase “predetermined event” and found that the word predetermined has a plain and ordinary meaning—defined in advance. *Id.*

at 1118–19. Although in *IGT* “predetermined event” was not directly challenged as indefinite, its holding that all that is required is for a skilled artisan to understand that there is an event with a temporal aspect as to when it is determined applies here. “Prespecified” signifies that parameters are specified or determined in advance of some event. In this instance, both the patent specification and claims inform a skilled artisan that the parameters are specified ahead of the data transmission.

Because we conclude that the patent’s intrinsic evidence renders the meaning of the term “prespecified parameters” sufficiently clear, we cannot affirm this basis for the district court’s indefiniteness finding.<sup>3</sup>

## II. Means-plus-function limitations

Blizzard raises an additional indefiniteness challenge, directed at the asserted system claims. Claim 1 of the ’521 patent contains the following means-plus-function terms: (1) “means for detecting prespecified parameters of the data transmission between the data storage means and the computer unit” (first means) and (2) “second means for detecting prespecified parameters for data transmissions between said data storage means” (second means). *See* ’521 patent claim 1. Both parties agree that the two means limitations are governed by pre-AIA § 112, ¶ 6. Blizzard argues that the ’521 patent specification does not identify sufficient corresponding structure for either claimed means limitations and thus system claim 1 and its asserted dependent claims are indefinite. Appellees’ Br. at 44. Via Vadis argues that the specification discloses a network of computers and an algorithm as the corresponding structure and that this structure is the corresponding structure

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<sup>3</sup> We need not reach Via Vadis’s alternative definiteness arguments for “prespecified parameters” based on the Board’s IPR decision and judicial estoppel.

for both of the means limitations. Appellant's Reply Br. at 23. The district court agreed with Via Vadis and found that the '521 patent's specification disclosed a single structure for both means terms. After reviewing the specification and considering the parties' arguments, we disagree with the district court, this time siding with Blizzard's position that the system claims are invalid as indefinite because the specification fails to identify the corresponding structure for the second means limitation.

Means-plus-function claim limitations must satisfy the particularity requirements of § 112, ¶ 2. *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed. Cir. 2001). Construction of a means-plus-function limitation includes two steps. "First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs the function." *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012) (internal citations and quotations omitted). We review de novo what structures disclosed in the specification correspond to the "means" for performing a function. *Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1360 (Fed. Cir. 2000); see also *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). A structure disclosed in the specification qualifies as a "corresponding structure" if the specification or the prosecution history "clearly links or associates that structure to the function recited in the claim." *B. Braun Med.*, 124 F.3d at 1424. When the specification fails to identify sufficient structure for performing the claimed function, the means-plus-function limitation lacks any discernible scope, and the claim is invalid for indefiniteness. *Diebold Nixdorf, Inc. v. Int'l Trade Comm'n*, 899 F.3d 1291, 1303 (Fed. Cir. 2018).

The second means limitation requires a means for detecting prespecified parameters of data transmissions between two data storage means. There are a number of problems with Via Vadis's argument that the specification

provides a corresponding structure. As an initial matter, Via Vadis below argued, and the district court accepted, that the specification disclosed the same structure for both means limitations: “a network of computers programmed to perform” a certain algorithm. JA 27–32, 337–39, 346–47. Claim 1, however, states that the “second means for detecting” is located within the data storage means. *See* ’521 patent col. 27 ll. 36–38 (“the data storage means comprising a second means for detecting parameters”). It thus is wrong to say that the same hardware related to the first means (“a network of computers”) is also performing the second means (“data storage means”). At oral argument, Via Vadis admitted that the data storage means is not the hardware that performs the first means. Oral Arg. at 23:15–24:14. While Via Vadis suggested that column 4, lines 4 through 10 of the specification discloses that the data storage means itself is a computer system, that is a plainly incorrect reading of the passage. Also, claim 1 itself draws a distinction between a computer and the data storage means. ’521 patent col. 27 ll. 23–24 (“at least one computer unit which accesses the data of the data storage means”).

Moreover, we disagree with both Via Vadis and the district court that the two means limitations share the same algorithm, given that their recited functions are different. The function for the first means is “for detecting prespecified parameters of the data transmission between the data storage means and the computer unit,” whereas the function of the second means is “for detecting prespecified parameters for data transmissions between said data storage means.” Thus, the respective algorithms that carry out these recited functions involve parameters of different transmissions with different end points. While we do not disagree with Via Vadis’s hypothetical that it is possible for one structure to perform more than one function, nothing in the specification nor the claims of the ’521 patent supports that outcome here as to either the hardware or the

algorithm portion for performing the functions associated with the two means limitations.

At bottom, the specification does not associate the *data storage means* with detecting parameters, nor does it explain how the data storage means detects parameters. Moreover, Blizzard correctly points out that the specification only discloses a counter or timer measuring one parameter—data transmission duration—and thus there is no disclosed structure for detecting *multiple* prespecified parameters as required by claim 1. Appellees’ Br. at 47. In response, Via Vadis argues that the timer and counter provide two different measurements, and thus detect two different parameters. Appellant’s Reply Br. at 24. We find Via Vadis’s argument unavailing because the specification only refers to the counter and timer being used to measure transmission duration. ’521 patent col. 26 ll. 30–39. Via Vadis adopted that very position below. J.A. 340 (“[T]he patent discloses a counter and optional timer for the purposes of calculating transmission duration with pseudoreliable messages.”). We cannot find any instances, and Blizzard’s counsel at oral argument could not point us to any instances, in the specification where the counter was used to measure any parameter other than duration, such as fault rate. Therefore, the counter and timer both measure transmission duration, which is a single parameter. As mentioned above, the claimed function requires detecting more than one prespecified parameter. Thus, even assuming that the specification disclosed locating a counter or timer in the data storage means, the specification fails to disclose a corresponding structure for the second means’ function of detecting multiple parameters.

We find that the specification does not describe sufficient structure in the data storage means for detecting parameters of transmission between two or more data storage means. We therefore find the second means term indefinite, thus rendering claim 1 and its asserted dependent claims invalid. As such, we need not reach Blizzard’s

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additional indefiniteness challenge to the first means limitation.

#### CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. For the foregoing reasons, we affirm-in-part the district court's indefiniteness finding, but for a different reason than the one on which the district court relied. We conclude that claims 1, 4, 11–18, and 20–22 are indefinite because the specification fails to provide a structure corresponding to the recited “second means for detecting” claim limitation, and that claims 30–31, 33, and 40–46 are definite because the scope and meaning of “pre-specified parameters” is reasonably ascertainable by a skilled artisan.

**AFFIRMED-IN-PART AND REVERSED-IN-PART**