UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

BERKELEY*IEOR d/b/a B*IEOR,	)	
	)	
Plaintiff,	)	
	)	
v.	)	17 C 7472
	)	
TERADATA OPERATIONS, INC., et al.	)	
	)	
Defendants.	)	

MEMORANDUM OPINION

CHARLES P. KOCORAS, District Judge:

Before the Court is Plaintiff Berkeley*IEOR's ("Berkeley") motion for summary judgment and Defendant Teradata Operations, Inc.'s ("Teradata") motion for summary judgment. For the following reasons, Berkeley's motion is granted and Teradata's motion is granted-in-part and denied-in part.

BACKGROUND

In this patent infringement action, Berkeley asserts three patents that claim methods for calculating object level profitability—U.S. Patent Numbers 7,596,521 ("'521 Patent"), 7,882,137 ("'137 Patent"), and 8,612,316 ("'316 Patent") (together, "Asserted Patents").[1] On October 16, 2017, Berkeley initiated this suit against Teradata and its customers, Defendants W.W. Grainger, Inc. ("Grainger"), DHL Express (USA),

[1] Berkeley asserts claims 1–3 of the '521 Patent, claims 1 and 2 of the '137 Patent, and claims 1 and 2 of the '316 Patent ("Asserted Claims'). Claim 4 was found invalid as indefinite. Dkt. # 279.

Inc., Danzas Corporation d/b/a DHL Global Forwarding, and Air Express International USA, Inc. d/b/a DHL Global Forwarding ("Customer Defendants"). Dkt. # 1. Berkeley alleges in the second amended complaint that, through their use of the Teradata Value Analyzer ("TVA") technology, the Customer Defendants directly infringed the Asserted Patents under 35 U.S.C. §§ 271(a) and (g) (Counts I–IV) and Teradata induced infringement of the Asserted Patents under 35 U.S.C. § 271(b) (Count V). Dkt. # 41. The Court severed and stayed Counts I–IV against the Customer Defendants on March 7, 2019. Dkt. # 80.

Berkeley filed its motion for summary judgment on July 26, 2022, seeking judgment in its favor that the Asserted Patents are directed to patent-eligible subject matter under 35 U.S.C. § 101. Dkt. # 294. This was before expert discovery began; the Magistrate Judge did not set an expert discovery schedule until September 23, 2022. Dkt. # 318. Expert discovery closed on February 23, 2023. *See* Dkt. # 335. Teradata filed its motion for summary judgment on March 23, 2023, seeking judgment in its favor on indirect infringement and that the Asserted Patents are invalid under Section 101 as directed to ineligible subject matter.[2] Dkt. # 351.

The Asserted Patents

The parties agree that claim 1 of the '521 Patent is representative for purposes of these motions. It reads as follows:

1. A process for determining object level profitability in a computer,

[2] Berkeley filed a motion to exclude the opinions of Teradata's expert, Bruce Weber, which we recently denied. Dkt. # 405.

> comprising the steps of:
>
> providing a relational database management system ("RDBMS") operable in association with a computer;
>
> preparing information to be accessed electronically through the [RDBMS];
>
> establishing, in the relational database, rules for processing the prepared information;
>
> using the [RDBMS] to independently calculate at least one marginal value of profit for each object being measured using established rules as applied to a selected set of prepared information;
>
> using the [RDBMS] to calculate a fully absorbed profit adjustment value for each object being measured; and
>
> combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability.

Dkt. # 1-1, at 30:53–31:3.

According to the specification of the '521 Patent, "[m]any businesses today are struggling to accurately measure profit contribution at a level necessary to accurately measure profit contribution of individual customer interactions." Dkt. # 1-1, at 1:36–39. "Prior approaches to management's desire for an accurate measure of individual decisions (incremental or marginal) profit impact have been solved by automating the accounting process for implementing accounting methods." *Id*. at 3:39–42. But these prior art methods lacked an "adequate level of detail to measure an individual or incremental decision's impact on profit." *Id*. at 3:61–63. The claimed invention aimed to "gain this new level of profit resolution" by using "micro profit measurement rules applied at a granular level consistent with standard accounting practice using a combination of actuarial science and mathematical set theory." *Id*. at 3:63–65.

Furthermore:

> The invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a level not available today in a large individual customer scale business. This invention does this through a consistent application of measures to a class of business entities which represent the smallest common component of profit measurement desired—the Profit Object.

Id. at 3:65–4:7.

The specification explains that the Asserted Patents' invention involves a detail profit metric ("DPM") designed to be a computer database application, i.e., software, for profitability measurement. The DPM system "is designed for Rules to be applied to any object without loss of integrity of output":

> This design feature allows the user to incrementally migrate objects to increased measure precision as justified. This valuable piecewise increase in functionality is possible due to DPM's combination of rules and data in a mathematical set theoretic framework. This approach allows for a [RDBMS] implementation. It is nearly impossible [to] develop and maintain procedural based software with as much flexibility and with the capability to simultaneously support the number of calculation permutations required by DPM.

Id. at 10:35–46.

Use of the patented method "is especially suited for massively parallel computing technology where linear scalable capital investment in processing technology is possible vis-à-vis object and event count and rule complexity." *Id*. at 8:37–41. The claimed method takes "advantage of technological advances in massively parallel computing capability." *Id*. at 2:3–7. The prosecution history of U.S. Patent App. No.

09/545,628 ("'628 Application"), an application related to the Asserted Patents, states the invention was implemented "within a relational database, which has not been done before and allows the information to be analyzed in hours instead of days for a major Bank using parallel calculation processes." Dkt. # 297-9, at 413. Conversely, at least one prior art reference "teaches a sequential process[.]" Dkt. # 297-10, at 181.

Evidence

In resolving a motion for summary judgment, the Court views the evidence in the light most favorable to the nonmovant. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986). The following facts are taken from the record and are undisputed unless otherwise noted.[3]

Richard Lepman, the inventor of the Asserted Patents, submitted a declaration during prosecution stating that the rules of the prior art methods "do not lend themselves into RDBMS rules, since they are procedural in nature, i.e., use if-then-else stepwise iterative logic." Dkt. # 297-6, at 5. He further stated that the "invention requires the use of an electric [RDBMS] having parallel operation and calculation capabilities, which can be run using structured query language. There is no such discussion in [the prior art] of a [RDBMS] or structured query language." *Id*. at 6. He continued:

> [T]he invention allows for four of the five factors to be processed in parallel by a [RDBMS] using formulas using selected object level data directly. [The prior art] teaches a sequential process, first classification

[3] Any asserted facts or factual disputes that were not supported by evidence or were immaterial or otherwise inadmissible have not been included. Teradata's hearsay objections to Berkeley's experts' reports are overruled. *See infra*.

> and then aggregation, calculations are additions, without subsets. Thus, [the prior art] does not teach of using established rules applied to a selected set of prepared information to independently calculate at least one marginal value of profit for each object being measured.

Id. at 5–6.

As articulated by its expert, Jon Scarbrough, Berkeley asserts the two improvements over the prior art associated with the Asserted Claims are:

> Limitation 1[d(i)] – performing core profitability calculations inside a [RDBMS], rather than performing calculations inside a procedural-based software application, as was done previously; and Limitation 1[d(ii)-(iii)] – decomposing profitability factors into independent calculations so the RDBMS could perform multiple calculations simultaneously (i.e., in parallel) and on separate processors.

Dkt. # 354-4, ¶ 50. Scarbrough opined that the method of the Asserted Claims has "four profitability values: (1) net interest ('NI'); (2) other revenue ('OR'); (3) direct expense ('DE'); and (4) provisioning ('P') – calculated 'independently' of each other. This made it possible for the RDBMS to process multiple profit value calculations simultaneously and in parallel – rather than dependently, where calculations depending on prior calculations had to execute in sequence." *Id*. ¶ 57.

Scarbrough testified that "performing calculations inside a procedural-based software application" and "to perform profitability calculations at the object level in procedural-based software applications" were previously known in the prior art. Dkt. # 354-3, at 188:6–189:4. Berkeley disputes this fact, pointing to Scarbrough's report stating the Asserted Claims "disclose[] and recite specific ways to take advantage of RDBMS capabilities and parallel processing that improved upon the capabilities and

performance of traditional procedural-based computer software for computing object level profitability." Dkt. # 354-4, ¶ 63.

Scarbrough testified that the Asserted Claims do not require "the [RDBMS to] be on a particular piece of hardware." Dkt. # 354-3, at 116:11–18. He also stated that regarding the RDBMS of the patented invention, "when we're talking about calculating components of profit, by inference, it's got to be in the database. It can't be done somewhere else." *Id*. at 178:20–179:23.

According to Scarbrough, the '521 Patent covers a process in which at least one marginal value of profit is calculated for each object. He testified the Asserted Claims cover instances in which the system measures profitability for only one object. Scarbrough further stated that although a system that performs sequential calculations can do calculations that are independent from each other, any speed or efficiency enhancements attributed to the claimed invention arise from performing such calculations in parallel at the same time, rather than sequentially.

In 1999, Berkeley and NCR Corp. (Teradata's predecessor) executed an agreement wherein Berkeley licensed NCR for limited uses of Berkeley's and/or Lepman's inventions, and which listed the technology claimed in the Asserted Patents ("License Agreement"). In September of 2009, Berkeley sent a letter to Teradata disclosing the issuance of the '521 Patent. Berkely asked for a meeting to discuss "the impact of the issuance on, among other things, the License Agreement dated June 1, 1999 by and between [Berkeley and NCR], the sales of Value Analyzer by NCR over

the last several years that were not within the field of use specified by the License Agreement and sales of Value Analyzer and its progeny by Teradata Corporation, which we believe has no rights under the License Agreement whatsoever." Dkt. # 371-11.

In July 2010, the parties met in person to discuss, among other things, the '521 Patent and then-existing implementations of TVA. During that meeting, Teradata took the position that it and some of its customers were discontinuing use of TVA and did not perform certain steps recited in the '521 Patent, and that other customers fell within the Limited Field of Use. Citing the deposition transcript of Teradata's 30(b)(6) representative, Nancy Kalthoff, Teradata asserts that it stopped marketing TVA around 2011 or 2012. Berkeley disputes this, citing a later portion of the same transcript stating that Teradata's TVA marketing efforts continued into 2015.

Kalthoff testified that Teradata gained Defendant Grainger as a client because it was interested in TVA. Teradata and Grainger entered into a procurement agreement in 2010 where Teradata sold TVA to, and installed TVA for, Grainger. The procurement agreement provided that Teradata would provide maintenance services to Grainger through at least 2013 and that Teradata would provide software patches to Grainger. Teradata provided TVA software patches between 2010 and 2016. In a 2018 service model order with Grainger, Teradata agreed to install and configure TVA. Teradata stated in 2021 that Grainger was still using TVA. Teradata collected revenue from non-retail banking customers, including Grainger, through 2021.

Berkeley's non-infringement expert, Nancy Miracle, offered opinions regarding

direct infringement by only Grainger. She opined that by implementing and using TVA, Grainger infringed the Asserted Claims.

Miracle testified that how TVA is used by a customer would determine whether that customer infringed the Asserted Claims: it's a "configuration-by-configuration question." Dkt. # 352-3, at 101:14–102:11. She agreed that just because Grainger had access to certain TVA software modules does not necessarily mean it used them. Miracle stated that the claim term "fully absorbed profit adjustment value" requires that all a customer's indirect expenses be allocated to each profit object and balanced to the company's profit and loss. *Id*. at 97:3–99:5; 100:5–101:12. According to her, after TVA was sent to Grainger, Grainger's end users would change or add rules applied to make profitability calculations. But Miracle does not know what Grainger told Teradata regarding whether Grainger changed or added any rules. Documents she relied on show Teradata demonstrated the TVA software for Grainger in 2009 and performed work under a Statement of Work between the two companies in 2010.

Miracle testified that applying rules to calculate profit can be done without use of a computer, "probably with an army of people with abacuses but it would take a really long time and it would be error prone and very expensive." Dkt. # 352-3, at 148:6–11.

According to Miracle, "performing calculations in parallel" means "at the same time . . . . [p]arallel processing is a term of art which means that you can do two things at the same time in parallel without interacting between the two things." Dkt. # 374-3,

at 72:24–73:6. "[I]f you're doing calculations in parallel, you [might or might not] be doing them simultaneously." *Id*. at 73:7–12. Parallel calculations could be being done at the same time, but "they are separate" and "on different paths, but the paths could happen at the same time." *Id*. at 73:14–20.

LEGAL STANDARD

Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986) (citation omitted). "A genuine dispute as to any material fact exists if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Kvapil v. Chippewa Cnty.*, 752 F.3d 708, 712 (7th Cir. 2014) (cleaned up).

In deciding whether a dispute exists, the Court must "construe all facts and reasonable inferences in the light most favorable to the non-moving party." *Citizens for Appropriate Rural Roads v. Foxx*, 815 F.3d 1068, 1074 (7th Cir. 2016). The nonmovant "must go beyond the pleadings" to demonstrate that there is evidence "upon which a jury could properly proceed to find a verdict in [their] favor." *Modrowski v. Pigatto*, 712 F.3d 1166, 1168–69 (7th Cir. 2013). "The existence of a mere scintilla of evidence, however, is insufficient to fulfill this requirement." *Wheeler v. Lawson*, 539 F.3d 629, 634 (7th Cir. 2008). And "[c]onclusory statements, not grounded in specific facts" cannot defeat a motion for summary judgment. *Bordelon v. Bd. of Educ.*, 811

F.3d 984, 989 (7th Cir. 2016) (cleaned up).

Not all factual disputes will preclude the entry of summary judgment, only those that "could affect the outcome of the suit under governing law." *Outlaw v. Newkirk*, 259 F.3d 833, 837 (7th Cir. 2001) (citation omitted). In deciding a motion for summary judgment, the Court's sole function is "to determine whether there is a genuine issue for trial." *Tolan v. Cotton*, 572 U.S. 650, 657 (2014). The Court cannot weigh conflicting evidence, assess the credibility of witnesses, or determine the ultimate truth of the matter, as these are functions of the jury. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986); *Omnicare, Inc. v. UnitedHealth Grp., Inc.*, 629 F.3d 697, 704–05 (7th Cir. 2011).

Local Rule 56.1 "aims to make summary-judgment decisionmaking manageable for courts." *Kreg Therapeutics, Inc. v. VitalGlo, Inc.*, 919 F.3d 405, 415 (7th Cir. 2019). The rule requires the moving party to file a statement of facts that demonstrates its entitlement to judgment as a matter of law. *Petty v. City of Chi.*, 754 F.3d 416, 420 (7th Cir. 2014); LR 56.1(a)(2). The nonmoving party must file a response to that statement and may provide a separate statement of additional facts. *Petty*, 754 F.3d at 420; LR 56.1(b)(2)–(3). Both statements of facts and statements of additional facts must consist of concise numbered paragraphs, supported by citations to specific pages in the evidentiary record. *See* LR 56.1(d)(1)–(2).

If the responding party disagrees with the other party's fact, it must cite specific parts of the record disputing the fact and "concisely explain how the cited material

controverts the asserted fact." LR 56.1(e)(3). Failure to properly controvert a fact supported by admissible evidence results in its admission. *Cracco v. Vitran Express, Inc.*, 559 F.3d 625, 632 (7th Cir. 2009); LR 56.1(e)(3). Facts that a party raises in a Local Rule 56.1 response that do not controvert the asserted fact, and that are not included in the party's statement of additional facts, are stricken. The Court also disregards legal arguments in the statement of facts and does not consider statements unsupported by admissible evidence. *See Cady v. Sheahan*, 467 F.3d 1057, 1060–61 (7th Cir. 2006). "The purpose of the 56.1 statement is to identify for the Court the evidence supporting a party's factual assertions in an organized manner[;] it is not intended as a forum for factual or legal argument." *Malec v. Sanford*, 191 F.R.D. 581, 585 (N.D. Ill. 2000). The Local Rules are not mere technicalities, and district courts are entitled to expect strict compliance with Local Rule 56.1. *See Slabon v. Sanchez*, 2023 WL 3451274, at *2 (7th Cir. 2023).

DISCUSSION

I. Whether Berkeley's Motion Was Premature

We first address Teradata's argument that Berkeley's motion for summary judgment regarding eligibility under Section 101 was premature. Teradata argued the "Court should delay ruling on [Berkeley's] summary judgment motion until expert discovery is completed and the outstanding claim construction issues resolved." Dkt. # 308, at 17. Teradata continued: "Even if [Berkeley] chooses not to offer expert testimony on whether the claimed invention involved any 'inventive concept' or was

merely conventional, Teradata should be allowed to offer its own expert testimony on that fact issue." *Id.* Despite this argument, Teradata did not request leave to file a sur-reply to put forth any further factual or legal argument after expert discovery closed. Even if Berkeley's motion was premature at the time, which we do not believe it was, Teradata got its wish in that the Court did not rule on the motion before the close of expert discovery. But Teradata did nothing to supplement its briefing.[4]

Teradata also argued Berkely's motion was premature because claim construction was still "unsettled." *Id*. Any outstanding issue has been resolved. *See* Dkt. # 313 (denying Teradata's motion to enter agreed upon claim construction terms or, alternatively, for supplemental claim construction). We thus proceed to the merits of the parties' respective motions.

II. Patent Eligibility under Section 101

Both Berkeley and Teradata seek summary judgment in their favor on the issue of the Asserted Patents' eligibility under 35 U.S.C. § 101. Patent eligibility under Section 101 is a question of law that may involve underlying questions of fact. *See Mortg. Grader, Inc. v. First Choice Loan Servs. Inc*., 811 F.3d 1314, 1325 (Fed. Cir. 2016). Courts look to the two-step test articulated in *Alice Corp. v. CLS Bank Int'l*, 573

[4] Teradata did file its own summary judgment motion on Section 101. So, even though cross motions for summary judgment are analyzed separately and we view the evidence in different lights depending on the movant, we believe we have a full record before us on this issue. Because the evidence cited in Teradata's motion does not change the outcome of Berkeley's motion, we see no reason to further delay this ruling by requesting a sur-reply from Teradata when it did not affirmatively seek one.

U.S. 208, 217–18 (2014), to determine whether a claim is eligible for patenting under Section 101. For *Alice* step one, we must assess whether the claims at issue are directed to a patent-ineligible concept, namely a law of nature, natural phenomenon, or abstract idea. *Id*. at 217. If the answer is yes, we then consider the claim elements, both individually and as an ordered combination, to determine whether they contain an "inventive concept" sufficient to "'transform the nature of the claim' into a patent-eligible application." *Id*. at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc*., 566 U.S. 66, 72–73, 78 (2012)). In other words, we must determine whether the claims recite additional features beyond the abstract idea, rendering the claims eligible for patenting. Those additional features must be more than "well-understood, routine, conventional activity." *Mayo*, 566 U.S. at 79–80.

a. *Alice* Step One

The Court's order denying Teradata's motion to dismiss on the basis of Section 101 ineligibility, issued on March 25, 2020, is relevant here. Dkt. # 119 ("MTD Order"). There, Teradata argued the Asserted Patents were directed to ineligible subject matter and therefore invalid. Dkt. # 105. The Court ruled that while the Asserted Patents failed at *Alice* step one, there was a dispute of fact regarding step two.

As to step one, we determined the Asserted Claims are directed to an abstract idea and therefore ineligible: "The claims do no more than prepare, organize, and apply mathematical calculations to existing information. No matter how much of an advance in the business field the claims recite, the advance lies entirely in the realm of abstract

ideas." MTD Order, at 11. We rejected Berkeley's argument that the Asserted Patents were not abstract because limitation 1(d) "improved on the prior technological process for determining object level profitability," emphasizing that "the 'character of the whole' [of the Asserted Claims] involves the overarching method of performing profitability calculations with a computer system." *Id.* "Accordingly, the character as a whole, not just an isolated limitation, is directed to excluded subject matter because calculating profitability is an abstract idea." *Id.*

We analogized the Asserted Claims to those the Federal Circuit found directed to an abstract idea in *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014). The *Digitech* claims were directed to the abstract idea of organizing information through mathematical correlations because they "'recite[d] a process of taking two data sets and combining them into a single data set' simply by organizing existing data into a new form . . . . [A] process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea." MTD Order at 12 (citing *Digitech*, 758 F.3d at 1350–51). There was "no material difference" between the Asserted Claims and the claims in *Digitech* because "the '521 Patent claims a method whereby a business starts with data in the form of financial statements, that data is processed via a RDBMS where multiple profitability factors are handled independently and simultaneously, and the output is the same data in the new form of object level profitability." *Id.* The Asserted Claims were therefore directed to an abstract idea and failed at *Alice* step one.

Here, Berkeley recognizes the Court found the Asserted Patents failed *Alice* step one at the motion to dismiss stage but presents no new argument or evidence at summary judgment to alter the Court's opinion that the Asserted Patents' character, as a whole, is directed to the abstract idea of calculating profitability. We already rejected Berkeley's argument that limitation 1(d) "improved on the prior technological process for determining object level profitability," *see id*. at 11, yet that is essentially what Berkeley argues again here. The two cases Berkeley discusses that were decided after the MTD Order do not change the analysis. *See Mentone Sols. LLC v. Digi Int'l Inc*., 2021 U.S. App. LEXIS 33793 (Fed. Cir. 2021); *Google LLC v. EcoFactor, Inc*., 2022 U.S. Dist. LEXIS 82508 (N.D. Cal. 2022). And Berkeley's citation to the section of the MTD Order discussing *Alice* step two does nothing to alter our step one conclusion.[5]

We therefore find that, because the Asserted Patents do no more than prepare, organize, and apply mathematical calculations to existing information, they are directed to the abstract idea of calculating profitability.

[5] Berkeley also cites the Patent Trial and Appeal Board's ("PTAB") decision to not institute Covered Business Method ("CBM") review. But that decision is neither relevant to the question at hand—what the Asserted Claims are directed to—nor binding on this Court. *See Credit Acceptance Corp. v. Westlake Servs*., 859 F.3d 1044, 1053 (Fed. Cir. 2017) (under 35 U.S.C. § 325(e)(1), estoppel did not attach to "claims upon which the Board declined to institute [covered business method] review"). The PTAB was discussing whether the claims of the Asserted Patents "recite[d] a technological feature that is novel and unobvious over the prior art" and "solve[d] a technical problem using a technical solution," not eligibility under Section 101. *See* Dkt. # 297-4, at 11, 16; *see also Mayo*, 566 U.S. at 89–90 (it is not enough for subject-matter eligibility that claimed techniques be novel and nonobvious in light of the prior art).

b. *Alice* Step Two

Because the Asserted Patents are directed to the abstract idea of calculating profitability, we now turn to step two of the *Alice* inquiry. The Court considers "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 77–78). The Supreme Court described this analysis as a "search for an inventive concept—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Id*. at 217–18 (cleaned up). "A claim that recites an abstract idea must include additional features to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea." *Id*. at 221 (cleaned up). Computer-implemented claims may be patent eligible when they improve an existing technological process. *Id*. at 223. The computer functions must be more than "well-understood, routine, and conventional activities previously known to the industry." *Id*. at 225 (cleaned up).

We find there is no genuine dispute of fact as to this question; the Asserted Patents contain an inventive concept and are thus patent-eligible. As to *Alice* step two, in the MTD Order we ruled that a fact issue existed regarding whether the Asserted Claims contained an inventive concept that would "transform" them into patent-eligible subject matter. MTD Order, at 14. Berkeley alleged "the inventive concept of the Asserted Patents is found in the non-conventional and non-generic arrangement of the

claim limitations," while Teradata argued the Asserted Patents "merely recite the use of conventional devices." *Id*. at 14. We denied Teradata's motion because Berkeley "sufficiently allege[d] the shortcomings of the prior art and how the invention overcomes these shortcomings by improving computer functionality." *Id*.

Specifically, Berkeley alleged the Asserted Patents made it possible "to achieve a technologically scalable solution that can measure profit at a level of precision, resolution, and speed not possible in the prior art" which had "little success in its attempts" to calculate profitability for individual customer accounts. *Id*. Berkeley alleged the Asserted Claims contain an inventive concept that arranges known conventional pieces in an unconventional order, "combin[ing] at least three concepts to achieve the desired result: (1) the RDBMS itself performs profitability calculations, which provides speed and efficiency; (2) the calculations execute 'independently' of each other, allowing the method to take advantage of parallel processing capabilities that further improve on speed and efficiency; and (3) the method uses established rules as applied to a selected set of prepared information to perform the calculations." *Id*.

We ruled that "[d]rawing reasonable inferences in favor of Berkeley, as this Court must at the Rule 12(b)(6) stage, the SAC sufficiently alleges that the claimed unconventional combination improves the functioning and operation of the computer itself by performing parallel computations in a faster amount of time" than prior art methods. *Id*. at 15. Because Berkeley sufficiently alleged an inventive concept, the claims survived at *Alice* step two and we denied Teradata's motion.

Here, Berkeley maintains that limitation 1(d) "provides an improved data processing capability that significantly improved the performance relative to the prior art."[6] Dkt. # 295, at 13. According to Berkeley, limitation 1(d) "was not known, well understood, routine, and/or conventional, in its claiming of the particularized and unconventional use of RDBMS capabilities, not simply the mere presence of an RDBMS in a system." *Id*. Rather, the ordered combinations of the Asserted Claims, including the RDBMS performing individual, independent profitability calculations, "provides greater speed and efficiency and results in an improvement to software and computer applications," and allows the database to use parallel processing capabilities to further improve speed and efficiency. *Id*.

Berkeley further explains that the Asserted Claims "recite a specific set of ordered steps, including using the RDBMS, itself, to independently perform the individual profit calculations, as well as place the rules themselves into the database as opposed to placing the rules in the SQL software." *Id*. at 14; *see also id*. (stating the prior art's rules "do not lend themselves into RDBMS rules."). Berkeley says Limitation 1(d)'s specific ordered steps "provide a level of flexibility that was nearly impossible to achieve with the prior art and enables profit measurement at a level not available at the time of the invention in a large individual customer scale business." *Id*.

[6] Berkeley asserts the Court "previously ruled that the Asserted Claims contained an inventive concept and passed step two of the *Alice* test" in the MTD Order. That is incorrect. As discussed above, we ruled there was a fact dispute as to inventive concept but because Berkeley sufficiently *alleged* one, we denied Teradata's motion.

(cleaned up).

Additionally, Berkeley asserts the prior art methods lacked an "adequate level of detail to measure an individual or incremental decision's impact on profit." *Id*. at 15 (cleaned up). Those methods "could not provide sufficient flexibility or the capability to support the number of calculations required to achieve the functionality made possible by the Asserted Claims." *Id*. The improvement over the prior art "was more efficient and cost effective, allowing information to be analyzed in hours instead of days . . . using parallel calculations processes." *Id*. (cleaned up). Berkeley concludes that the Asserted Claims are directed to a specific improvement in the functionality of a computer and thus contain an inventive concept.

In response, Teradata fails to raise a genuine dispute of fact. It primarily relies on a misguided claim construction argument, contending the Asserted Claims do not "require" parallel processing. Teradata bases this argument on the Court's construction of the term "independently calculated", which we construed to mean "running in the [RDBMS] the corresponding formulas for 'at least one marginal value of profit,' where one calculation does not depend on the other." Dkt. # 279 ("Claim Construction Order"), at 7–8. The Court rejected Teradata's inclusion of the word "simultaneously" because it would have "improperly add[ed] a limitation." *Id*. at 8. We explained that "[a]lthough the patented invention describes performing the independent calculations simultaneously in an embodiment, there is no necessity to do so, and no such limitation is recited. The claims intentionally provide direction to perform the independent

calculations simultaneously, sequentially, or if necessary, not perform some of them at all." *Id*.

Teradata asserts this "broad" construction means the Asserted Claims are not limited to parallel processing and limitation 1(d) "requires only a single calculation of the marginal value of profit, and even in methods where multiple calculations are made, those calculations can be performed sequentially, not in parallel." Dkt. # 308, at 13. According to Teradata, Berkeley consequently "cannot rely on statements in the '521 patent specification that the claimed invention(s) of the Asserted Patents made it possible to perform simultaneous RDBMS calculations using massively parallel computing hardware to achieve a faster, more efficient and more scalable profit calculator" because "these stated improvements and advantages associated with parallel processing are irrelevant to the asserted claims as broadly construed by the Court at [Berkeley's] own suggestion." *Id*. (cleaned up).

This argument fundamentally misunderstands both the Court's construction and general patent law. Just because the Asserted Patents do not "require" parallel processing" does not mean that they do not provide for parallel processing. Patents typically contain many embodiments. Not all embodiments will be covered by the claims, but "the broadest reasonable interpretation of a patent must be given in light of the claims and specification" and a "construction which reads the preferred embodiment out of" the claim scope would be "at odds" with the specification and "rarely, if ever correct." *See PPC Broadband, Inc. v. Corning Optical Communs. RF, LLC*, 815 F.3d

747, 755 (Fed. Cir. 2016). The Claim Construction Order made it clear that the Asserted Claims do cover parallel processing: "the patented invention describes performing the independent calculations simultaneously in an embodiment." Dkt. # 279, at 7–8. Although "there is no necessity to do so," the Asserted Claims "intentionally provide direction to perform the independent calculations simultaneously, sequentially, ***or*** if necessary, not perform some of them at all." *Id*. (emphasis added). Teradata's argument that parallel processing is "irrelevant" just because it is not "required" by the Asserted Claims is illogical and incorrect.

Next, Teradata argues that "the only evidentiary support" Berkeley provides in support of its argument that limitation 1(d) was not known, well-understood, routine, and/or conventional "are statements from [Lepman's declaration submitted] during prosecution of the patent to distinguish a particular piece of prior art." Dkt. # 308, at 14. That is not true—Berkeley also cites the specification, which discusses the general state of the art at the time of the patented invention. *See* Dkt. # 295, at 14–15. And factual assertions in the patent specification can be conclusive evidence of inventiveness. *See Berkheimer v. HP Inc*., 881 F.3d 1360, 1370 (Fed. Cir. 2018) ("[S]ummary judgment [on patent eligibility] was improper, given the fact questions created by the specification's disclosure."); *see also PPS Data, LLC v. Jack Henry & Assocs*., 404 F. Supp. 3d 1021, 1040–41 (E.D. Tex. 2019) (collecting cases).

Teradata's discussion of two Federal Circuit cases does not move the needle. It first cites *Elec. Power Grp., LLC v. Alstom S.A.*, in which the court affirmed that

"nothing in the claims, understood in the light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information." 830 F.3d 1350, 1355 (Fed. Cir. 2016). But Teradata cites no evidentiary support for its conclusion that the invention cannot supply an inventive concept because it uses "the RDBMS in the precise manner for which it was designed without any alteration to its fundamental structure or operation." *See* Dkt. # 308, at 15.

Teradata's citation to *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1283 (Fed. Cir. 2018), is similarly unpersuasive. There, the court held the alleged benefits of the claimed invention were "not improvements to database functionality" but were instead "benefits that flow from performing an abstract idea in conjunction with a well-known database structure." *Id*. at 1288. Teradata argues the same result is warranted here because "the parallel processing benefits [Berkeley] points to as resulting from the invention are not improvements to the operation of a conventional RDBMS" but rather "are merely the alleged benefits of performing an abstract profit calculation on an RDBMS according to its standard operation." Dkt. # 308, at 16. Again, Teradata cites no evidence showing the patented invention's combination of elements was conventional.

In the MTD Order, we found there was a dispute of fact because Teradata contended the "Asserted Patents merely recite the use of conventional devices." MTD Order, at 14. But here, Teradata fails to show the combination of elements does not

provide an inventive concept.[7] At bottom, Teradata has not raised a genuine dispute of fact as to whether the Asserted Patents contain an inventive concept. *See Grant v. Trs. of Ind. Univ.*, 870 F.3d 562, 568 (7th Cir. 2017) ("As the 'put up or shut up' moment in a lawsuit, summary judgment requires a non-moving party to respond to the moving party's properly-supported motion by identifying specific, admissible evidence showing that there is a genuine dispute of material fact for trial." (cleaned up)); *Singer v. Raemisch*, 593 F.3d 529, 533 (7th Cir. 2010) (nonmovant "must do more than raise some metaphysical doubt as to the material facts; he must come forward with specific facts showing that there is a genuine issue for trial." (cleaned up)). Berkeley has cited sufficient evidence to show the claimed unconventional combination improves the functioning and operation of the computer itself by performing parallel computations in a faster amount of time.[8] Summary judgment is therefore granted in Berkeley's favor

[7] Teradata argues Berkeley's motion for summary judgment was premature when filed. As discussed above, we find it appropriate to rule on Berkeley's motion as it was briefed. We further note that the evidence contained in Teradata's affirmative motion on the patent eligibility issue, even if Teradata *had* put it forth in a sur-reply, would not have changed the Court's conclusion. Teradata's only cited evidence in support of its position on the lack of inventive concept was two pieces of deposition testimony from Scarbrough, Berkeley's expert. The first was his testimony that the Asserted Claims do not require the RDBMS "to be on a particular piece of hardware," but Teradata did not explain why that matters and as discussed above, just because claims do not require something does not mean they do not provide for something. *See* Dkt. # 351, at 7. The second was Scarbrough's testimony that *in the patented invention*, "calculating components of profit . . . [has] got to be in the database. It can't be done somewhere else." *Id.*; *see* Dkt. # 354-3, at 178:20–179:23 (discussing the specification language found at Dkt. # 1-1, 10:10–:17). Teradata implies Scarbrough was speaking about RDBMS systems generally, but that is not supported by the cited evidence. Teradata thus has no evidence supporting its conclusion that the Asserted Patents describe "off-the-shelf" technology and Teradata cannot sufficiently raise a dispute of fact as to the inventive concept question.

[8] We also find the PTAB's ruling (discussed *supra*) relevant (although not binding or dispositive) regarding *Alice* step two. Because computer-implemented claims can confer an inventive concept

on the issue of the Asserted Patents' subject-matter eligibility under Section 101.

III. Indirect Infringement

A company infringes a patent when it "without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . during the term of the patent therefor[.]" 35 U.S.C. § 271(a). The first step in an infringement analysis is determining the meaning and scope of the patent claims asserted to be infringed, and the second step is comparing the properly construed claims to the device accused of infringing. *Duncan Parking Techs., Inc. v. IPS Grp. Inc.*, 914 F.3d 1347, 1360 (Fed. Cir. 2019). "To establish literal infringement, every limitation set forth in a claim must be found in an accused product, exactly." *Microsoft Corp. v. GeoTag, Inc.*, 817 F.3d 1305, 1313 (Fed. Cir. 2016) (citation omitted). Under the doctrine of equivalents, the accused product infringes the patent if "there is equivalence between the elements of the accused product . . . and the claimed elements of the patented invention." *Id.* (citation omitted). The patentee has the burden of proving infringement by a preponderance of the evidence. *SmithKline Diagnostics, Inc. v. Helena Lab'ys Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988).

Whoever "actively induces infringement of a patent shall be liable as an

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when they improve an existing technological process, the PTAB's conclusions that "RDBMS [performing] profitability calculations significantly improves performance relative to procedural based software, [and] represents a solution to a technical problem using a technical solution" and that the patented process "describe[s] a distinctive software-based process that harnesses benefits to computer performance[,] improves computer efficiency[,] and permits desirably faster calculation performance" support the Court's conclusion. *See* Dkt. # 297-4, at 16; Dkt. # 297-5, at 16.

infringer." 35 U.S.C. § 271(b). "[L]iability for inducement must be predicated on direct infringement." *Omega Patents, LLC v. CalAmp Corp.*, 920 F.3d 1337, 1345 (Fed. Cir. 2019) (quoting *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 572 U.S. 915, 921 (2014)). A defendant is liable for induced infringement under Section 271(b) if it "took certain affirmative acts to bring about the commission by others of acts of infringement and had 'knowledge that the induced acts constitute patent infringement.'" *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1286 (Fed. Cir. 2020) (quoting *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 765–66 (2011)). Intent requires knowledge of the infringing character of the induced conduct and not mere knowledge of the patent. *See Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 639–40 (2015). "While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice." *Glaxosmithkline LLC v. Teva Pharms. USA, Inc.*, 7 F.4th 1320, 1327 (Fed. Cir. 2021) (citation omitted).

Teradata seeks summary judgment in its favor on Berkeley's induced infringement claim (Count V), which alleges Teradata knowingly induced infringement of the Asserted Patents by marketing, distributing, selling, and/or encouraging the use of TVA by Teradata's customers. Teradata first argues that Berkeley has no evidence of direct infringement by any of the Customer Defendants, and indeed its infringement expert Miracle only opined as to infringement by one customer (Grainger). Rather, Berkeley and Miracle "openly admit they have no information about whether Grainger

uses TVA to perform the particular steps" of the Asserted Claims.[9] Dkt. # 351, at 10. Teradata contends that even if Berkeley can show Grainger had access to TVA, mere access is not enough; Grainger must have used the modules in an infringing manner. And Miracle testified that whether a customer infringed is a "configuration-by-configuration question" of how that specific customer used TVA.

For example, the term "fully absorbed profit adjustment value" in limitation 1(e) requires that all of a company's indirect expenses be allocated to each profit object and "balanced to the company's profit and loss, P&L." Dkt. # 351, at 12.[10] According to Teradata, neither Berkeley nor Miracle point to any evidence that in Grainger's implementation of the TVA software, Grainger allocated all of its indirect expenses across all of the objects for which object level profitability was calculated. *Id.*

In response, Berkeley argues "Miracle's report on infringement proves the Asserted Claims were infringed directly by a third-party – in this case, Grainger." Dkt. # 372, at 9. Berkeley then cites specific sections of Miracle's report opining that

[9] Teradata quotes from Berkeley's motion to vacate the order to sever and stay the customer defendants, in which Berkeley argued, for example, that it could not make its case and lacked critical information for indirect infringement. As discussed in both the Magistrate Judge's report and recommendation denying that motion, Dkt. # 345, and this Court's subsequent denial of the motion, Dkt. # 360, it was Berkeley's own delays that resulted in any lack of relevant discovery.

[10] Teradata also asserts Berkeley cannot establish direct infringement of the Asserted Claims' requirement for "calculat[ing] at least one marginal value of profit" by applying "established rules" to a "selected set of prepared information." Dkt. # 351, at 12. But the cited fact, No. 66, is inadmissible because the testimony is not supported by the transcript Teradata included with its statement of facts. *See* Dkt. # 352-3; *see also* L.R. 56.1(d)(2).

Grainger performs each part of limitation 1(d).[11] *Id*. at 9–10. But Berkeley in no way responds to Teradata's argument that Berkeley fails to establish infringement of limitation 1(e), thereby waiving its argument. *See U.S. v. Holm*, 326 F.3d 872, 877 (7th Cir. 2003) ("It is not the obligation of this court to research and construct the legal arguments open to parties," and "perfunctory and undeveloped arguments" are waived.); *Rose v. United States*, 929 F. Supp. 305, 309 (N.D. Ill. 1996) ("the paucity of argument on this issue in her response brief essentially waives the claim") (citing *Bakalis v. Golembeski*, 35 F.3d 318, 326 n.8 (7th Cir. 1994)); *see also Grant*, 870 F.3d at 568. Because infringement requires that "every limitation set forth in a claim [] be found in an accused product," *Microsoft*, 817 F.3d at 1313, and because "liability for inducement must be predicated on direct infringement," *Omega Patents*, 920 F.3d at 1345, Berkeley's induced infringement claim fails and summary judgment is granted in Teradata's favor.

We note that summary judgment is also warranted because Berkeley puts forth

[11] Teradata argues in its reply that "statements from an expert report are inadmissible on summary judgment" and contends that Miracle's deposition testimony somehow cancels out her opinions contained in her report. Dkt. # 382, at 10. A hearsay objection to an expert report is cured by an affidavit or declaration stating the expert would testify consistent with the report at trial, *Allen v. Benton*, 2022 U.S. Dist. LEXIS 235182, at *4 (N.D. Ill. 2022), which Berkeley has provided, Dkt. # 393-1. And Miracle's conflicting statements simply create a dispute of fact; her deposition testimony does not override her earlier report, as Teradata seems to suggest. *See Anderson*, 477 U.S. at 255 (courts cannot weigh conflicting evidence, assess the credibility of witnesses, or determine the ultimate truth of the matter at summary judgment). Teradata also argues Miracle was only referring to "aspirational documents on the possible functions of the system, and her unsupported speculation as to how Grainger's system work[s]," but Teradata does not support that statement with evidence. Dkt. # 382, at 10–11. Teradata's objections to Miracle's report are overruled.

no evidence of intent to induce. Teradata contends Berkeley has no evidence that Teradata had knowledge of the infringing character of the induced conduct. According to Teradata, the only evidence in the record regarding intent is the fact they met with Berkeley in 2010 to discuss the '521 Patent and expressed that Teradata and its customers *did not* perform some of the steps recited in the claims. Additionally, Miracle testified that infringement by the Customer Defendants is a "configuration-by-configuration" inquiry, and after TVA was sent to Grainger, Grainger's end users would change or add rules applied to make profitability calculations. But she was not aware that Grainger told Teradata anything regarding whether Grainger changed or added any rules. Teradata therefore concludes that Berkeley has no evidence to show Teradata had the intent to induce infringement.

Berkeley's response is insufficient. It first points to the evidence that Berkeley informed Teradata of the issuance of the '521 Patent and asked for a meeting "to discuss [Teradata's] ongoing sales of TVA, particularly those falling outside the Limited Field of Use of the License Agreement." Dkt. # 372, at 12.[12] But again, the evidence shows that at that meeting, it was Teradata's position that it and its customer *did not* perform the steps of the '521 Patent. Next, Berkely cites evidence that Teradata advertised TVA and maintained TVA software for its customers, contending this shows Teradata encouraged patent infringement. *Id.* at 13. But none of those documents supply any

[12] Berkeley's argument about Teradata's sales to customers outside the scope of the License Agreement is irrelevant to the issue of whether Teradata believed those customers infringed the Asserted Patents.

evidence that Teradata knew of the alleged infringing nature of the use of TVA.

A claim for inducement requires that the defendant had knowledge the induced acts constituted patent infringement. *TecSec*, 978 F.3d at 1286; *Global-Tech*, 563 U.S. at 765–66. Knowledge of the patent's existence is not enough; the element of intent requires knowledge of the infringing character of the induced conduct. *See TecSec*, 978 F.3d at 126 (citing *Commil*, 575 U.S. at 639–40). Berkeley has simply not come forward with any evidence that Teradata had the requisite intent to induce infringement. The only evidence before us shows Teradata believed its customers were *not* infringing. Summary judgment is thus granted in Teradata's favor on Count V and we need not address Teradata's damages argument.

CONCLUSION

Berkeley's motion for summary judgment [294] is granted and Teradata's motion for summary judgment [351] is granted-in-part and denied-in-part. Status hearing set for 4/9/2024 at 10:15 a.m.

It is so ordered.

Charles P. Kocoras

Charles P. Kocoras
United States District Judge

Date: March 7, 2024