

**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.,)	
)	
Defendant.)	

MEMORANDUM OPINION

CHARLES P. KOCORAS, District Judge:

The Court is tasked with the construction of disputed claim terms in United States Patent Nos. 7,596,521 (the “’521 patent”), 7,882,137 (the “’137 patent”), and 8,612,316 (the “’316 patent”) (collectively, the “patents-in-suit”). Having reviewed the written submissions and heard arguments, the Court construes the disputed terms as follows.

BACKGROUND

The patents-in-suit share a common application and specification and claim methods for calculating object level profitability. The parties have identified seven disputed terms. The parties also dispute the definition of a person of ordinary skill in the art (“POSITA”).

The majority of the disputed terms can be found in claims 1, 3, and 4 of the ’521 patent. Claim 1 of the ’521 patent reads as follows (with the disputed terms noted):

1. A process for determining object level profitability in a computer, *comprising the steps of:*

[Limitation 1] providing a relational database management system operable in association with a computer;

[Limitation 2] preparing information to be accessed electronically through the relational database management system;

[Limitation 3] establishing, in the relational database, rules for processing the prepared information;

[Limitation 4] using the relational database management system *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;

[Limitation 5] using the relational database management system to calculate a fully absorbed profit adjustment value for each object being measured; and

[Limitation 6] combining the at least *one marginal value of profit* and the fully absorbed profit adjustment value to create a measure for object level profitability.

(JA 000028–29).

Claim 3 of the '521 patent reads (with the disputed term noted):

3. The process of claim 1, wherein the preparing step further includes the step of calculating *opportunity values of funds used or supplied* by each object being measured.

(JA 000029).

Claim 4 of the '521 patent reads (with the disputed term noted):

4. The process of claim 1, wherein the establishing step includes the steps of providing the information necessary to select objects, and *performing the correct profit calculus*.

(JA 000029).

Additionally, Claim 1 of both the '137 and '316 patents reference a “*computerized profit database having profit information*”—another disputed term. (JA 000060, 000091).

The Court conducted a *Markman* hearing where each party was allowed to explain its proposed construction of the disputed terms and answer questions from the Court concerning their respective positions. It is now ready to rule on the construction of the disputed terms.

LEGAL STANDARD

The construction of a patent claim, “including terms of art within its claim, is exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). In general, claim terms are given the meaning they would have to a person having ordinary skill in the art at the time of the patent’s effective filing date. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). To determine what a person having ordinary skill in the art would understand a term to mean, the Court first considers the intrinsic evidence, which includes claim language, the patent’s specification, and the patent’s prosecution history. *See Unique Concepts v. Brown*, 939 F.2d 1558, 1561 (Fed. Cir. 1991). The intrinsic evidence forms the public record of what the patentee claimed, and the public is entitled to rely on this record to determine a patent’s scope. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

When considering the intrinsic evidence, the Court first looks at the language of the claim or claims in which the term appears. *Phillips*, 415 F.3d at 1314. Claim language supplies information about the meaning of a term through the context and relationship to other claims. *Id.* And because terms are usually used consistently, a term in one claim of the patent can provide insight into its meaning when used elsewhere. *Id.*

Next, the Court looks at the specification, which clarifies the claim language. *Id.* at 1315. “The terms must be read in view of the specification, of which they are a part” because “they are part of a fully integrated written instrument.” *Id.* (cleaned up). The specification, therefore, is both highly relevant to and often dispositive of a term’s meaning. *Id.* However, the specification is not without pitfalls—limitations found within it cannot be read into claims that do not contain the same limitations. *See Golight, Inc. v. Wal-Mart Stores*, 355 F.3d 1327, 1331 (Fed. Cir. 2004).

Finally, the Court looks at the patent’s prosecution history. A patentee can act as a lexicographer, but he or she must do so in the written description or prosecution history with “reasonable clarity, deliberateness, and precision.” *Id.* at 1332. The prosecution history can clarify a term’s definition and must be consulted to determine whether the patentee gave a special meaning to a term or disclaimed aspects of the invention. *See generally id.* at 1331–33.

If there remain ambiguities after considering the intrinsic evidence, the Court may look to extrinsic evidence. *See Phillips*, 415 F.3d at 1317. Extrinsic evidence

includes dictionaries, learned treatises, and expert and inventor testimony. *Id.* The Court may also consider extrinsic evidence, especially technical dictionaries, if the Court finds it useful to understand technical terms of art. *Id.* However, extrinsic evidence is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Id.* (cleaned up). Additionally, extrinsic evidence cannot contradict claim language that is unambiguous from the intrinsic evidence. *Id.* at 1324. With these principles in mind, we now examine the disputed terms.

DISCUSSION

The parties identified seven disputed terms. They also dispute the definition of a POSITA as it pertains to the patents-in-suit. We address each disputed term in turn.

I. Term 1: “comprising the steps of”

For the first disputed term—“comprising the steps of”—the parties specifically dispute whether the steps must be performed in a specific order. Teradata argues that the inherent logic of the steps must be performed sequentially and in the order of the claim. Berkeley, on the other hand, argues that the customary meaning of “steps” means that the steps can be done in any order and that the steps in Claim 1 invoke the special patent law meaning of the word “comprising.”

a. Berkeley’s Proposed Construction

Berkeley proposes the plain and ordinary meaning, that is, “non-sequential steps.” Berkeley argues the construction of “comprising the steps of” by invoking the

customary meaning of the word “comprising” in patent law. Further, Berkeley argues the steps of Limitation 2 of the ’521 patent do not depend on Limitation 1. Limitation 2 teaches “preparing the information,” but does not specify whether this step must be performed using the relational database management system or with a separate system’s software before the electronic access is made from the relational database.

b. Teradata’s Proposed Construction

Teradata proposes “comprising the following steps to be performed in the specific order set forth herein.” Teradata argues the plain language of the claims at issue both recite order and dictate a progression as a matter of logic. Teradata asserts it is not arguing that “comprising” needs to be construed; instead, Teradata’s position is that the independent claims must be logically construed to require the disclosed steps to be performed in sequence, not that the term “comprising” connotes such a requirement.

c. The Court’s Conclusion

We adopt Berkeley’s proposed construction, the plain and ordinary meaning. “Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one.” *Interactive Gift Exp., Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001) (citing *Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1322 (Fed. Cir. 1999) (stating that “not every process claim is limited to the performance of its steps in the order written”). However, such a result can ensue when the method steps implicitly require that they be performed in the order written. *See*

Loral, 181 F.3d at 1322 (stating that “the language of the claim, the specification and the prosecution history support a limiting construction[, in which the steps must be performed in the order written,] in this case”). But in this case, nothing in the claim or the specification here directly or implicitly requires such a narrow construction.¹

II. Term 2: “to independently calculate”

Terms 2, 3, and 4 are related. With Term 2, the parties dispute Teradata’s inclusion of the word “simultaneously” in its proposed construction.

a. Berkeley’s Proposed Construction

Berkeley proposes “running in the relational database management system the corresponding formulas for ‘at least one marginal value of profit,’ where one calculation does not depend on the other.” Berkeley contends the ordinary meaning of “independently” is not “simultaneously” doing independent tasks; rather, independently ordinarily means one object is not dependent upon another. Because “independently” and “simultaneously” are not interchangeable, Berkeley argues, the addition of the word “simultaneously” to the claim language improperly introduces a limitation not present in the patent. Berkeley also notes that the word “and” in the sequential list of profit calculations, if read with the word “simultaneously,” would contradict the preceding words “at least one.”

¹ This Order should not be read, however, to exclude the possibility the claim limitations themselves do not require a specific order of steps.

b. Teradata’s Proposed Construction

Teradata proposes “*simultaneously* running in the relational database management system the corresponding formulas for ‘at least one marginal value of profit,’ where one calculation does not depend on the other.” Teradata focuses on the fact the specification twice emphasizes “[t]he *simultaneous* use of these five analytical frameworks makes possible a detailed level of profit calculation.”

c. The Court’s Conclusion

We find Teradata’s addition of “simultaneously” improperly adds a limitation. Although 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. We therefore adopt Berkeley’s proposed construction of “running in the relational database management system the corresponding formulas for ‘at least one marginal value of profit,’ where one calculation does not depend on the other.”

III. Term 3: “at least one marginal value of profit”

Term 3—“at least one marginal value of profit”—is a continuation of the previous term.

a. Berkeley’s Proposed Construction

Berkeley proposes “the difference between an object’s marginal revenue and the marginal cost of producing that object.” Berkeley says Teradata attempts to limit the

scope of the claim by necessarily incorporating all five separate profit values (net interest, other revenue, direct expense, and provisioning), when each independently is one marginal value of profit.

b. Teradata’s Proposed Construction

Teradata proposes “each [of] the Net Interest, Other Revenue, Direct Expense, and Provisioning calculations.” Teradata argues its construction is supported by the intrinsic record, as “the specification repeatedly makes clear that the marginal value of profit is determined by five distinct factors.” According to Teradata, Berkeley’s construction provides no real meaning, for simply constricting one marginal value of profit to mean the difference marginal revenue and marginal cost does nothing more than restate the limitation. Teradata further contends Berkeley’s construction expressly omits the key marginal profit calculations that form the bedrock of the claimed process.

c. The Court’s Conclusion

We adopt Berkeley’s proposed construction of “the difference between an object’s marginal revenue and the marginal cost of producing that object.” Teradata’s construction exceeds “one value” and attempts to limit the scope of the claim by necessarily incorporating all five separate profit values.

IV. Term 4: “for each object being measured”

The next disputed term is “for each object being measured.” The disagreement between Teradata and Berkeley is what that object should be: according to Teradata, it should be each of the smallest components of a business on which profit *could* be

measured. Berkeley construes the term to mean the smallest components on which profit *is* being measured.

a. Berkeley’s Proposed Construction

Berkeley proposes “For each of the smallest common component of profit being measured.” Berkeley primarily relies on the specification to support its construction. Namely, it points to the same passage that is cited by Teradata, which notes that “through a consistent application of measures to a class of business entities which represent the *smallest common component of profit desired*—Profit Object.”

b. Teradata’s Proposed Construction

Teradata proposes “for each of the smallest common component of a business on which profit can be measured.” Teradata asserts that Berkeley and Teradata previously agreed upon the construction of this term in the context of the ’316 patent, and that because the usage is similar between the ’316 patent and the ’521 patent (the patent currently at issue), this should bind the Court in construing the ’521 language. Unlike the other six terms in dispute, Teradata appears to argue that the construction of the term “for each object being measured” in the ’316 patent should dictate the construction of the ’521 claim—the representative patent at issue. To support its broad interpretation of “for each object being measured,” Teradata juxtaposes the language of the claim, “for each object being measured,” with the specification, which defines the “profit object” as the “smallest common component of a business on which profit can be measured.”

c. The Court’s Conclusion

The weight of the evidence favors Berkeley’s construction of the term “for each object being measured” to mean “for each object smallest common component of profit being measured” because the text of the claim itself supports this construction, as does the specification and the prosecution history of the ’521 patent. The text, combined with the specification, indicate that the term must mean only the objects’ profit actually being measured, not the infinite and indefinite of any object’s profitability which could be measured. Accordingly, we adopt Berkeley’s proposed construction of “For each of the smallest common component of profit being measured.”

V. Term 5: “computerized database having profit information”

The next disputed term is “computerized database having profit information.”

a. Berkeley’s Proposed Construction

Berkeley proposes the ordinary and customary meaning, which is a “computer database having profit information.” Berkeley argues Teradata’s incorporation of the five profit measures is not needed, leads to more confusion, and is a semantic incorrection. Berkeley says Teradata’s construction improperly narrows the claims to an embodiment, and further argues the plain and ordinary meaning of the term can be discerned by dictionary definitions.

b. Teradata’s Proposed Construction

Teradata proposes “a computerized database that contains at least the following five profit measures: Net Interest, Other Revenue, Direct Expense, Provisioning,

Indirect Expense.” Teradata argues there is no generally accepted or plain meaning for “profit database” as distinct from any other database, nor is there any plain meaning for “profit information” as generally accepted in the art or common parlance. This, Teradata says, shows that the term as a whole leaves too much room for interpretation to the point that, without guidance and definition from the specification, it lacks any real meaning.

c. The Court’s Conclusion

The Court agrees with Berkeley’s proposed construction. The term is self-explanatory. As Berkeley points out, the database is where the results are stored; it is the relational database management system that “runs” or executes computations.

VI. Term 6: “opportunity values for funds used or supplied”

The next disputed term is “opportunity values for funds used or supplied.” This limitation is present in independent Claims 1 of both the ’137 and ’316 patents, and dependent Claim 3 of the ’521 patent.

a. Berkeley’s proposed construction

Berkeley proposes “the cost for funds used or revenue for funds supplied.” Berkeley argues that Teradata improperly narrows the term by offering a meaning that is specific to only one industry and conflates a single embodiment as the claim. Berkeley also says its construction provides a clearer definition that even a layperson can understand.

b. Teradata’s Proposed Construction

Teradata proposes “funds transfer pricing (funds transfer treatment rates).” Teradata says the specification does not expressly address “opportunity values,” which is not a term of art typically understood by one of skill in the art.

c. The Court’s Conclusion

We adopt Berkeley’s construction, “the cost for funds used or revenue for funds supplied.” This construction is simpler and more easily understood, whereas Teradata’s proposed construction “muddies the disputed term, rather than giving it clarity.” Berkeley’s construction is supported in the specification.

VII. Term 7: “performing the correct profit calculus”

The seventh disputed term is “performing the correct profit calculus.” In construing the term, the parties focus on Claim 1 and Claim 4 of the ’521 patent.

a. Berkeley’s Proposed Construction

Berkeley proposes either the plain and ordinary meaning, or “a correct method of computation of profit which combines financial measurement techniques with non-modeled data and calculation parameters.” Berkeley argues a POSITA can reasonably ascertain the meaning of the term in Claim 4 of the ’521 patent given the scope of the claims and context of the specification. Specifically, Claim 4 limits Claim 1 by directing a POSITA to select and calculate the correct profit measures, or “rules,” from Claim 1. Claim 1 provides a correct calculation when completed and Claim 4 relates to the “correct profit calculus” in a narrower circumstance than Claim 1. Claim 4 recites

performing “the establishing step” of Claim 4 correctly after selecting the objects used in the process.

b. Teradata’s Proposed Construction

Teradata argues the term is indefinite and also lacks an antecedent basis. Teradata contends that Claim 1, from which Claim 4 depends, does not make any mention of a “correct profit calculus,” yet Claim 4 requires an understanding of the “correct profit calculus.” Because the term has no antecedent basis in the independent claim, Teradata says, Claim 4 cannot meaningfully narrow the scope of the independent claim.

Teradata further asserts the claim is invalid as ambiguous on its face because the claim requires “the correct profit calculus” without providing any guidance as to what distinguishes a correct calculus from an incorrect one. Teradata argues the limitation is entirely subjective, rendering it invalid as a matter of law.

c. The Court’s Conclusion

“[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. Biosign Instruments, Inc.*, 572 U.S. 898, 901 (2014). We agree with Teradata and find the term indefinite.

VIII. Person of Ordinary Skill in the Art

Finally, the parties dispute the definition of a POSITA.

a. Berkeley's Proposed Definition

Berkeley proposes the following:

“A person of ordinary skill in the art should have at least a master’s degree in computer science, accounting, or management information systems with at least two years of experience in accounting or financial software and their applications to relational database management systems. A person with less education but more relevant practical experience may also meet this standard.”

Berkeley emphasizes the importance of the master’s degree as well as experience in the applications of relational database management systems because the relational database management system is so critical to the invention. Without this experience, Berkeley says, a person would not really understand what the inventor meant or understand the invention itself. Berkeley argues its POSITA definition takes into account the sophistication of the technology and the educational level of active workers in the field: the technology pertaining to the patents-in-suit is extremely sophisticated, and the financial and actuarial formulas are not taught until graduate level or post-college certifications.

b. Teradata's Proposed Definition

Teradata proposes the following:

“A person of ordinary skill in the art would have at least a bachelor’s degree in computer science, accounting, or management information systems, or a similar field with at least two years of experience in accounting or finance software, or a person with a master’s degree in computer science, accounting, or management information systems, or a similar field with a specialization in accounting or finance software. A

person with less education but more relevant practical experience may also meet this standard.”

Teradata argues Berkeley’s proposed definition is far too restrictive, so much so that it actually excludes the inventor of the patents-in-suit from being considered a POSITA. Berkeley concedes Mr. Lepman does not have a master’s degree but emphasizes the vast amount of relevant practical experience Mr. Lepman has.

c. The Court’s Conclusion

The Federal Circuit has advised that the “[f]actors that may be considered in determining the level of skill in the art include: (1) the educational level of the inventors; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the field.” *Env’tl Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696 (Fed. Cir. 1983). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). Further, a POSITA must be determined by looking at the field as a whole, rather than just the inventor of the patented device. “The actual inventor’s skill is irrelevant to the inquiry.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985).

The Court agrees with Berkeley’s proposed definition of a POSITA. Experience in the applications of relational database management systems is critical. Moreover,

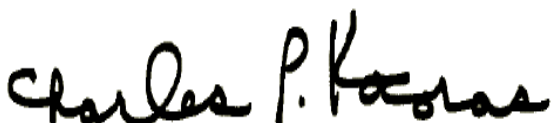
Berkeley's definition is not as restrictive as Teradata claims, for it explicitly leaves room for "a person with less education but more relevant practical experience."

CONCLUSION

For the reasons set forth above, the disputed claim terms have the meaning set out in this Memorandum Opinion.

It is so ordered.

Dated: June 14, 2022



Charles P. Kocoras
United States District Judge