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Paper 19
Entered: January 19, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DISH NETWORK L.L.C. and DISH TECHNOLOGIES L.L.C.,
Petitioner,

v.

SOUND VIEW INNOVATIONS, LLC,
Patent Owner.

IPR2020-01035
Patent 6,502,133 B1

Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and JOHN A. HUDALLA, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

DISH Network L.L.C. and DISH Technologies L.L.C. (collectively, "Petitioner") filed a Petition (Paper 3,[1] "Pet.") requesting an *inter partes* review of claims 1, 9–13, and 21 of U.S. Patent No. 6,502,133 B1 (Ex. 1001, "the '133 patent"). Petitioner filed a Declaration of Anthony Wechselberger

[1] Petitioner filed two versions of the Petition. We refer to the "Corrected" version at Paper 3.

(Ex. 1006) with its Petition. Patent Owner, Sound View Innovations, LLC ("Patent Owner"), filed a Preliminary Response (Paper 10, "Prelim. Resp.").[2]

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the petition and the preliminary response "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." For the reasons that follow, we do not institute an *inter partes* review.

I. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies DISH Network L.L.C., DISH Technologies L.L.C., DISH Network Service L.L.C., DISH Network Corporation, Sling TV L.L.C., and Cloudera, Inc. as real parties-in-interest. Pet. 1; Paper 8, 1. Patent Owner identifies Sound View Innovations, LLC and Sound View Innovation Holdings, LLC as real parties-in-interest. Paper 5, 1.

B. Related Proceedings

The parties identify the following district court actions related to the '133 patent (Pet. 1–2; Paper 5, 1–2):

[2] The parties present arguments about our discretion to deny the Petition under 35 U.S.C. § 314(a). Prelim. Resp. 5–15; Papers 14, 15. Given our determination that Petitioner has not made the necessary showing for institution, we do not reach the issue of whether to exercise our discretion to deny the Petition.

Sound View Innovations, LLC v. DISH Network LLC, No. 1:19-cv-03707 (D. Colo. filed Dec. 30, 2019);

Sound View Innovations, LLC v. Cigna Corp., No. 1:19-cv-00964 (D. Del. filed May 24, 2019);

Sound View Innovations, LLC v. Walmart Inc., No. 1:19-cv-00660 (D. Del. filed Apr. 9, 2019);

Sound View Innovations, LLC v. Delta Air Lines, Inc., No. 1:19-cv-00659 (D. Del. filed Apr. 9, 2019)

Sound View Innovations, LLC v. Hulu, LLC, No. 2-17-cv-04146 (C.D. Cal. filed June 2, 2017);

Sound View Innovations, LLC v. CBS Interactive Inc., No. 1:19-cv-00146 (D. Del. filed Jan. 25, 2019)

Sound View Innovations, LLC v. FMR, LLC, No. 1-17-cv-01388 (D. Del. filed Oct. 3, 2017);

Sound View Innovations, LLC v. Twitter, Inc., No. 1-16-cv-00652 (D. Del. filed July 29, 2016);

Sound View Innovations, LLC. v. LinkedIn Corp., No. 1-16-cv-00497 (D. Del. filed June 24, 2016); and

Oracle Corp. v. Alcatel Lucent, No. 5-08-cv-02363 (N.D. Cal. filed May 7, 2008).

In addition, the parties identify two *inter partes* review cases related to the '133 patent: IPR2018-00582 and IPR2020-00814. Pet. 2; Paper 5, 1–2.

In IPR2018-00582, Hulu, LLC, challenged claims 1, 9–13, and 21 of the '133 patent based on different prior art references. In a Final Written Decision dated August 5, 2019, we determined that Hulu, LLC, had not

shown by a preponderance of the evidence that claims 1, 9–13, and 21 of the '133 patent are unpatentable. Ex. 2001.

IPR2020-00814 was settled and terminated prior to a decision on institution of *inter partes* review. IPR2020-00814, Paper 10.

C. The '133 patent

The '133 patent relates to "processing real-time events in applications such as telecommunications and computer networks." Ex. 1001, 1:19–22. Figure 1 of the '133 patent is reproduced below.

FIG. 1

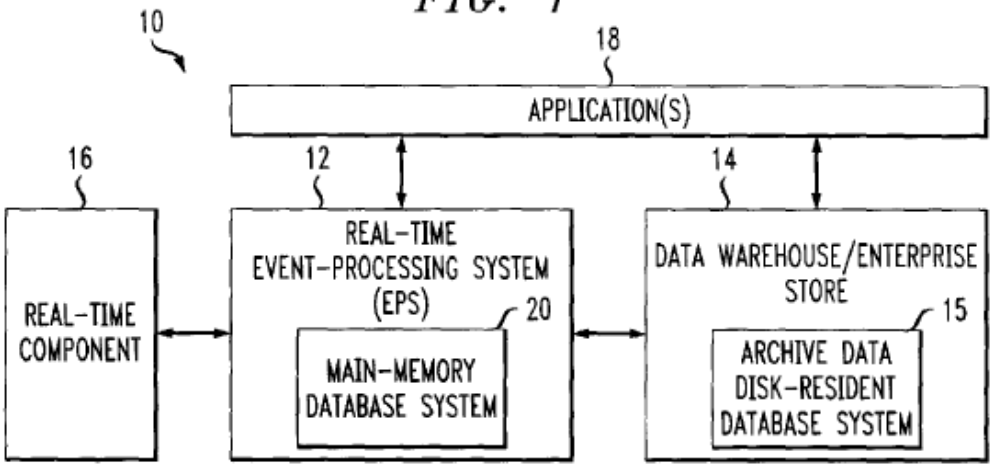

Figure 1 depicts information processing system 10 for real-time event processing. *Id.* at 2:52–53, 3:20–21. Processing system 10 includes real-time event processing system (EPS) 12, data warehouse/enterprise store (DW/ES) 14, real-time component 16, and one or more applications 18. *Id.* at 3:19–25. Real-time EPS 12 includes main-memory database system 20, which is where data necessary for event processing are stored to meet real-time performance goals. *Id.* at 3:25–28, 3:34–36. Real-time EPS 12 may be implemented in whole or in part using a computer or other type of digital data processor. *Id.* at 4:22–24. Due to space limitations in

main-memory database system 20, individual processed event records are typically archived in DW/ES 14, which includes archive data and disk-resident database system 15. *Id.* at 3:23–24, 3:36–39. Applications 18 may be directed to billing, fraud detection/prevention, etc. *Id.* at 3:25–26.

Figure 2 of the ’133 patent is reproduced below.

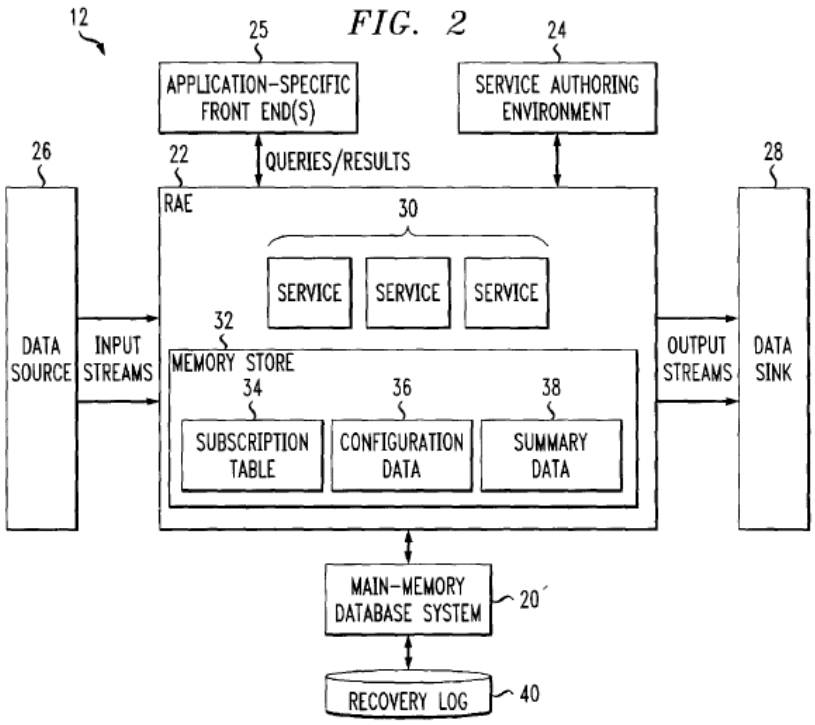

Figure 2 depicts EPS 12, which includes real-time analysis engine (RAE) 22 and service authoring environment (SAE) 24. *Id.* at 4:33–36. RAE 22, which serves as the real-time event processing and aggregation engine of EPS 12, is a single-site database system kernel adapted to meet the needs of high-throughput, real-time systems. *Id.* at 4:40–43. RAE 22 interacts with application-specific front ends 25 associated with applications 18, receives input streams from data source 26, and delivers output streams to data sink 28. *Id.* at 4:50–53. Data source 26 and data sink 28 may represent a client associated with applications 18. *Id.* at 4:53–56, 4:66–5:2.

D. Illustrative Claim

Of the challenged claims, claims 1, 13, and 21 of the '133 patent are independent. Claims 9–12 depend directly or indirectly from claim 1. Claim 1 is illustrative of the challenged claims and recites:

> 1. An apparatus for processing events generated by at least one system application, the apparatus comprising:
>
> a processor for executing code to implement at least a portion of at least one real-time analysis engine, wherein the real-time analysis engine processes the events, and wherein associated with the real-time analysis engine in a main-memory database system is recovery information regarding a recovery point for the real-time analysis engine.

Id. at 32:23–31.

E. Prior Art

Petitioner relies on the following prior art:

> European Patent Application Publication No. EP 0809387 A2, filed May 20, 1997, published Nov. 26, 1997 (Ex. 1011, "Jagadish");
>
> Philip Bohannon et al., "The Architecture of the Dali Main-Memory Storage Manager," *Multimedia Tools and Applications*, Vol. 4, Issue 2, 1997, at 115–51 (Ex. 1012, "Dali"); and
>
> Abraham Silberschatz et al., *Database System Concepts* (3rd ed. 1997) (Exs. 1013, 2005, "DSC").[3]

[3] Petitioner provides excerpts of DSC with its Petition at Exhibit 1013. Patent Owner provides further excerpts of DSC with its Preliminary Response at Exhibit 2005. In addition, we note that Patent Owner refers to DSC as "Silberschatz" in its papers. *See, e.g.*, Prelim. Resp., at v.

F. The Asserted Grounds

Petitioner challenges claims 1, 9–13, and 21 of the '133 patent on the following grounds (Pet. 8):

Claims Challenged	35 U.S.C. §	References
1, 9, 10, 12, 13, 21	103(a)[4]	Jagadish, Dali
11	103(a)	Jagadish, Dali, DSC

II. ANALYSIS

We now consider Petitioner's asserted grounds and Patent Owner's arguments in the Preliminary Response to determine whether Petitioner has met the "reasonable likelihood" standard for institution under 35 U.S.C. § 314(a).

A. Legal Standards

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary

[4] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the '133 patent was filed before March 16, 2013 (the effective date of the relevant amendments), the pre-AIA version of § 103 applies.

considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

B. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art would have had a "bachelor's degree in electrical engineering or computer science, or other equivalent degree or experience, with at least two years of experience in the design and development of data processing systems and associated databases." Pet. 23–24. Mr. Wechselberger testifies similarly. Ex. 1006 ¶ 44. Patent Owner does not dispute Petitioner's definition of the level of ordinary skill at this time.

For purposes of this Decision, we adopt Petitioner's definition of the level of ordinary skill in the art. On the present record, we are satisfied that this definition comports with the level of skill necessary to understand and implement the teachings of the '133 patent and the asserted prior art.

C. Claim Interpretation

In an *inter partes* review, we construe each claim "in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R. § 42.100(b). Accordingly, our claim construction standard is the same as that of a district court. *See id*. Under the standard applied by district courts, claim terms are generally given their plain and ordinary

meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Petitioner puts forth a number of terms for construction. Pet. 24–28. For purposes of this Decision, we analyze the challenged claims under Petitioner's proposed construction of "real-time analysis engine" as being a "computer system for both receiving and processing events within a few milliseconds of the events occurring." Pet. 25–26.

Based on the current record, we determine that no other terms require explicit construction. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy' . . . ." (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Obviousness Ground Based on Jagadish and Dali

Petitioner contends claims 1, 9, 10, 12, 13, and 21 would have been obvious over the combination of Jagadish and Dali. Pet. 28–65. Patent Owner disputes Petitioner's contentions. Prelim. Resp. 15–51.

1. Jagadish

Jagadish is a European Patent Application Publication directed to "a system and method for pricing telecommunication transactions made over a communication network." Ex. 1011, 1:6–8. Figure 6 of Jagadish is reproduced below.

FIG. 6

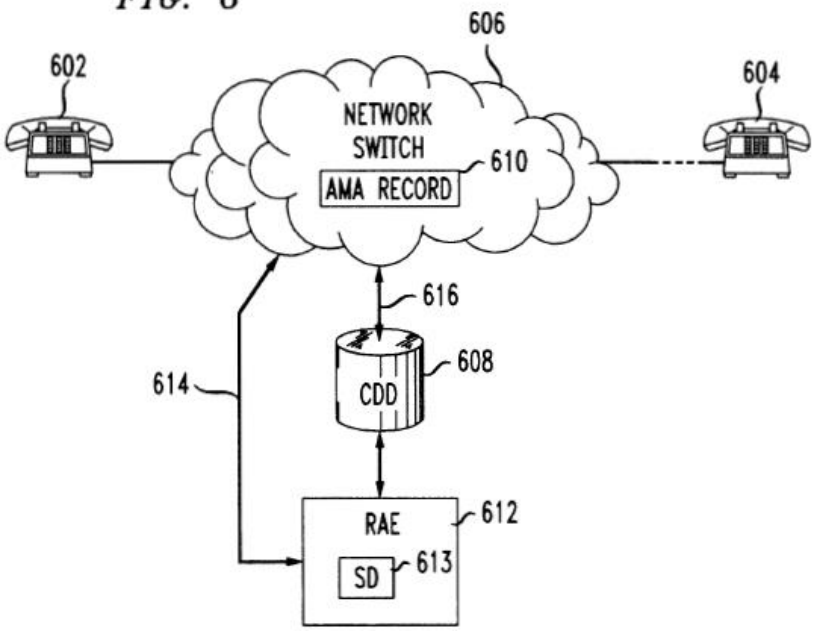

Figure 6 is a block diagram of a telephone call billing system in which calls may be routed based on real-time pricing information. *Id.* at 3:14–16. A call is initiated at telephone 602 and routed to telephone 604 through network switch 606. *Id.* at 7:14–16. Network switch 606 generates Automated Message Accounting (AMA) record 610 that is passed to Call Detail Database (CDD) 608 and then on to Real-Time Analysis Engine (RAE) 612 for processing. *Id.* at 7:16–18. RAE 612 may use AMA records 610 to generate priced call data in the form of priced call values and current bills. *Id.* at 7:18–20. Priced call data may be stored in Summary Database (SD) 613 that is located within RAE 612. *Id.* at 4:46–48, 7:20–21.

Network switch 606 may query RAE 612 for priced call data via datalink 614. *Id.* at 7:22–24.

2. Dali

Dali is a paper directed to "a main memory storage manager designed to provide the persistence, availability and safety guarantees one typically expects from a disk-resident database, while at the same time providing very high performance by virtue of being tuned to support in-memory data." Ex. 1012, 1.[5] Dali describes the performance requirements of "a real phone-company application where phone call data is recorded, and queries against the data can be issued," which "requires several thousand (albeit small) requests (lookups/updates) to be processed per second, with less than 50 milliseconds latency for lookups." *Id.* Dali posits that "the storage needs of these types of applications would best be met by using an underlying main-memory storage manager that supports an array of functionality such as transaction management, data organization, concurrency control and recovery services." *Id.* at 2.

Dali proposes a "main-memory resident" database system where "database files opened by a process are directly mapped into the address space of that process." *Id.* at 6, 8. The system implements "multi-level recovery for main-memory" so that the database may be recovered "to a

[5] Each page of Dali includes three different page numbers. We follow Petitioner's prevailing practice of citing its added page numbers in the footer of Dali (e.g., "DISH, Exh. 1012, Page 1 of 38"). For consistency, we have translated Patent Owner's cited pages into this format even though Patent Owner referenced pages using a different set of page numbers in its papers.

consistent state in the case of system as well as process failures." *Id.* at 1, 11.

3. Claim 1

Our disposition of this case turns on Petitioner's analysis of the recited "real-time analysis engine" of claim 1 based on Petitioner's own proposed construction that it is a "computer system for both receiving and processing events within a few milliseconds of the events occurring." Pet. 26. In particular, claim 1 recites "a processor for executing code to implement at least a portion of at least one real-time analysis engine." Ex. 1001, 32:25–26. For the processor executing code, Petitioner cites Jagadish's teaching of a general-purpose computer, which was known to include a processor "capable of running . . . software." Pet. 32–33 (quoting Ex. 1011, 3:48–51) (citing Ex. 1006 ¶¶ 113–114). Regarding the "real-time analysis engine" implemented by the processor, Petitioner notes Jagadish's RAE 212 may be implemented on a general-purpose computer running software. *Id.* at 33 (citing Ex. 1011, 3:48–51). Regarding the "real-time" aspect, Petitioner cites Jagadish's teaching that "each individual call record is received and rated in real time" for incoming call record events. *Id.* at 34 (quoting Ex. 1011, 5:39–43). Petitioner also relies on the combination of Jagadish's RAE with Dali's main-memory database system to achieve processing with less than 50 milliseconds of latency, as taught by Dali. *Id.* at 34–35 (citing Ex. 1012, 1, 4). Citing testimony from Mr. Wechselberger, Petitioner contends that an ordinarily skilled artisan "would have understood that 'less than 50 milliseconds' encompasses a 'few milliseconds,' and that the '50 millisecond' threshold for real-time performance is consistent with

the thresholds discussed in the '133 Patent of 'tens to hundreds of milliseconds.'" *Id.* at 35 (quoting Ex. 1001, 5:42–44) (citing Ex. 1006 ¶ 118).

Patent Owner argues that Petitioner has not shown how its proposed combination teaches "receiving and processing events within a few milliseconds of the events occurring," as set forth in Petitioner's proposed construction of "real-time analysis engine." Prelim. Resp. 16–25. Specifically, Patent Owner argues that Petitioner's cited teaching from Dali of response times "less than 50 milliseconds" is "about ***ten times slower*** than the Petition's own construction of 'a few milliseconds' would require." *Id.* at 23. Patent Owner also argues that Petitioner's citation from the '133 patent regarding "tens to hundreds of milliseconds" (Ex. 1001, 5:42–44) actually "is ***inconsistent***, not consistent, with the 'few milliseconds' the invention requires under Petitioner's own construction." Prelim. Resp. 24. Patent Owner explains that response times of "tens to hundreds of milliseconds" are "***not*** suitable for the Patent's system" and are not "the range of response times provided by the Patent's system." *Id.* (citing Ex. 1001, 1:33–42, 5:42–44).

We are persuaded by Patent Owner's arguments. To teach "receiving and processing events within a few milliseconds" under Petitioner's proposed construction, Petitioner relies on Dali's disclosure of a main-memory database system capable of "several thousand (albeit small) requests (lookups/updates) to be processed per second, with less than 50 milliseconds latency for lookups." Ex. 1012, 1. Even if we agreed that Dali's main-memory database system could be implemented successfully in Jagadish's RAE to receive and process events in "less than 50 milliseconds,"

Petitioner does not persuasively show how this teaches "receiving and processing events within a few milliseconds." In particular, we find the expressions "less than 50 milliseconds" and "a few milliseconds" to be significantly different, and Petitioner does not persuasively show that an ordinarily skilled artisan would have considered "less than 50 milliseconds" to teach "a few milliseconds" in the context of the recited "real-time analysis engine." We also have considered Petitioner's other cited teachings from Dali about processing with "much lower latency" than traditional processing applications (Pet. 34–35 (citing Ex. 1012, 4)), but we do not agree that a mention of lower latency teaches receiving and processing events within the required "few milliseconds."

Mr. Wechselberger's cited testimony does not fare better. He testifies as follows:

> Regarding the correspondence between the "few milliseconds" in the proposed construction and the "less than 50 milliseconds" in Dali, it would have been apparent to a[n ordinarily skilled artisan] that less than 50 is a high latency threshold and encompasses a "few" milliseconds, as a "few" is "less than 50." Moreover, to be sure, and clarifying the reference to a "few," the '133 Patent discusses provides high latency thresholds that are consistent with the "less than 50" milliseconds provided in Dali. For example, the '133 Patent discusses that latency should not exceed "tens to hundreds of milliseconds," thereby expressly encompassing the "less than 50," i.e., less than "tens," disclosed in Dali. Any purported difference between the range of "less than 50 milliseconds" disclosed in Dali and the "within a few milliseconds" of the proposed construction would have been obvious to a[n ordinarily skilled artisan] at least because both they are merely different expressions of the low latency enabled by using an underlying main-memory database that enables direct access to data.

Ex. 1006 ¶ 118 (citing Ex. 1001, 5:42–44).

As such, Mr. Wechselberger's testimony is based on mathematical reasoning that "a few milliseconds" is "less than 50 milliseconds." Yet his testimony does not establish why an ordinarily skilled artisan would have considered the disparity between these two expressions to be insignificant in the context of the '133 patent. Indeed, the specification of '133 patent suggests that the timing differences in these two expressions would matter. *See* Ex. 1001, 1:32–34 ("To meet the real-time requirements of the network, the service time for such events generally *must not exceed a few milliseconds*" (emphasis added)); 8:62–67 ("[T]he real-time performance requirements of the network . . . typically dictate that the response time for event processing must be on the order of *only a few milliseconds*" (emphasis added)). Moreover, Mr. Wechselberger's attempt to collapse all the cited time references into the same category of "different expressions of low latency" misses the point of Petitioner's own proposed construction, which is premised specifically on "receiving and processing events within a few milliseconds," and not a generic notion of low latency.

We are mindful that Petitioner bears the burden of proving unpatentability. *See* 35 U.S.C. § 316(e). In addition, "the Board must base its decision on arguments that were advanced by a party, and to which the opposing party was given a chance to respond." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016). As discussed above, Petitioner has not persuasively shown how the combination of Jagadish and Dali teaches "both receiving and processing events within a few milliseconds of the events occurring," as is required by Petitioner's own proposed construction of the recited "real-time analysis engine." Pet. 26. Thus, we determine Petitioner has not established a reasonable likelihood

that it would prevail in showing that claim 1 would have been obvious over the combination of Jagadish and Dali.

4. Claims 9, 10, 12, 13, and 21

Claims 9, 10, and 12 depend directly or indirectly from claim 1, and Petitioner's analysis for these claims incorporates the same analysis of the "real-time analysis engine" discussed above. *See* Pet. 55–62. Independent claims 13 and 21 also recite a "real-time analysis engine" (*see* Ex. 1001, 33:9–10, 34:20–21), and Petitioner's analysis for these claims relies on the same analysis of the "real-time analysis engine" discussed above. *See* Pet. 62–65. Thus, we determine Petitioner has not established a reasonable likelihood that it would prevail in showing that claims 9, 10, 12, 13, and 21 would have been obvious over the combination of Jagadish and Dali.

E. Obviousness Ground Based on Jagadish, Dali, and DSC

Petitioner contends the subject matter of claim 11 would have been obvious over the combination of Jagadish, Dali, and DSC. Pet. 66–70. Patent Owner disputes Petitioner's contentions. Prelim. Resp. 15–51.

1. DSC

DSC is a textbook directed to the concepts and algorithms used in commercial and experimental databases. Ex. 1013, at xv.

2. Claim 11

Claims 11 depends from claim 1, and Petitioner's analysis for claim 11 incorporates the same analysis of the "real-time analysis engine" discussed above with respect to the Jagadish–Dali ground. *See* Pet. 66–70.

Thus, we determine Petitioner has not established a reasonable likelihood that it would prevail in showing that claim 11 would have been obvious over the combination of Jagadish, Dali, and DSC.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Therefore, we do not institute an *inter partes* review on the asserted grounds as to any of the challenged claims.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied* as to all grounds and all challenged claims of the ’133 patent.

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