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4   UNITED STATES DISTRICT COURT

5   NORTHERN DISTRICT OF CALIFORNIA

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7   TERADATA US, INC.,   Case No. 20-cv-06127-WHO

           Plaintiff,
8

9   v.   **ORDER GRANTING MOTION TO
                                                 DISMISS**
10   SAP SE, et al.,   Re: Dkt. No. 34

           Defendants.
11

12   Defendants SAP SE, SAP America, Inc., and SAP Labs, LLC (SAP) move to dismiss the

13   patent infringement claims brought by plaintiff Teradata US, Inc. (Teradata) under U.S. Patent No.

14   '7,185,000 ('000 Patent) under *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208 (2014)

15   (*Alice*), arguing that the '000 Patent is directed to abstract mental processes or mathematics and

16   therefore fails to claim patent-eligible subject matter under 35 U.S.C. § 101.[1] SAP contends that

17   the claims of the '000 Patent are aimed at the "abstract idea" of providing a graphical display of

18   selected information when creating and analyzing queries produced by massively parallel

19   databases having multiple virtual processors. This graphical display was meant to assist database

20   administrators who were formally using textual representations that were dense and hard to parse.

21   SAP argues that the invention is simply a method of graphically displaying information and is

22   patent-ineligible. Teradata responds that the '000 Patent is not limited to the presenting and

23   display innovations – that standing alone would not be protected from an *Alice* challenge – but

24   covers innovative steps to determine the query execution plans and running of the queries on

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[1] In its First Amended Complaint (FAC), Teradata alleges SAP infringes five patents. Dkt. No. 32
27   (alleging infringement of United States Patent No. 6,763,357 (the '357 Patent), United States
     Patent No. 7,185,000 (the '000 Patent), United States Patent No. 7,904,419 (the '419 Patent),
28   United States Patent No. 9,851,923 (the '923 Patent), and United States Patent No. 9,720,623 (the
     '623 Patent)). SAP's challenge under *Alice* is limited to the claims in the '000 Patent.

parallel systems using virtual processors.

For the reasons, discussed below, I agree with SAP and GRANT the motion to dismiss under *Alice*. I DENY the other part of SAP's motion that Teradata's allegations of indirect infringement are insufficient for each of the five patents at issue. As discussed below, Teradata's allegations regarding SAP's knowledge and intent are sufficient at this juncture.

BACKGROUND

The '000 Patent is titled "Method And Apparatus For Presenting Query Plans." Dkt. No. 32-2.

Claim 1 describes:

> **1.** A method of presenting an execution plan for a query, comprising:
> determining steps of the query execution plan for a parallel database system;
> displaying the steps of the query execution plan in a graphical user interface; and
> depicting parallel execution of steps of the query execution plan in the graphical user interface,
> wherein depicting the parallel execution of steps comprises displaying plural elements corresponding to concurrently executing plural steps on respective processors of the parallel database system; and
> wherein determining the steps comprises determining steps of the query execution plan for the parallel database system running in a platform having plural virtual processors to handle access to data in the parallel database system.

Claim 1, '000 Patent.

Claims 19-25 describe:

> **19.** A system comprising: a graphical user interface; and
> a controller to determine an execution plan of a query based on emulation data that emulates an environment of a target system in which a parallel database system is implemented,
> the controller to display a representation of the execution plan in the graphical user interface.
> **20.** The system of claim 19, wherein the emulation data comprises cost-related information including a number of nodes in the target system and a number of CPUs in each node.
> **21.** The system of claim 19, wherein the emulation data comprises cost-related information including a number of virtual processors running in the target system.
> **22.** The system of claim 19, wherein the emulation data comprises cost-related information relating to costs of doing operations in the target system.
> **23.** The system of claim 19, wherein the emulation data represents a target system having a multi-node parallel processing

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system.

24. The system of claim 19, wherein the emulation data represents a target system running plural virtual processors for handling access to the parallel database system.

25. An article comprising one or more storage media containing instructions that when executed cause a controller to:

determine an execution plan of a query for a parallel database system; display the steps of the execution plan in a graphical user interface; and depict parallel execution of steps of the execution plan in the graphical user interface,

wherein depicting the parallel execution of steps comprises displaying plural elements corresponding to concurrently executing plural steps on respective processors of the parallel database system; and

wherein the instructions when executed cause the controller to receive environment information to emulate a target database system.

Claims 19-25 '000 Patent.

LEGAL STANDARD

I.   MOTION TO DISMISS

Under Federal Rule of Civil Procedure 12(b)(6), a district court must dismiss a complaint if it fails to state a claim upon which relief can be granted. To survive a Rule 12(b)(6) motion to dismiss, the plaintiff must allege "enough facts to state a claim to relief that is plausible on its face." *See Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 556 (2007). A claim is facially plausible when the plaintiff pleads facts that "allow the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *See Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (citation omitted). There must be "more than a sheer possibility that a defendant has acted unlawfully." *Id.* While courts do not require "heightened fact pleading of specifics," a plaintiff must allege facts sufficient to "raise a right to relief above the speculative level." *Twombly*, 550 U.S. at 555, 570.

In deciding whether the plaintiff has stated a claim upon which relief can be granted, a court accepts the plaintiff's allegations as true and draws all reasonable inferences in favor of the plaintiff. *See Usher v. City of Los Angeles*, 828 F.2d 556, 561 (9th Cir. 1987). However, the court is not required to accept as true "allegations that are merely conclusory, unwarranted deductions of fact, or unreasonable inferences." *See In re Gilead Scis. Sec. Litig.*, 536 F.3d 1049, 1055 (9th Cir. 2008).

To state a claim for patent infringement, "a patentee need only plead facts sufficient to

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1 place the alleged infringer on notice. This requirement ensures that the accused infringer has

2 sufficient knowledge of the facts alleged to enable it to answer the complaint and defend

3 itself." *Phonometrics, Inc. v. Hospitality Franchise Sys., Inc.*, 203 F.3d 790, 794 (Fed. Cir. 2000).

4 The Federal Circuit has "repeatedly recognized that in many cases it is possible and proper to

5 determine patent eligibility under 35 U.S.C. § 101 on a Rule 12(b)(6) motion." *Genetic Techs.*

6 *Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1373 (Fed. Cir. 2016).

7 **II.   PATENT ELIGIBILITY UNDER 35 U.S.C. § 101**

8 Under Section 101 of the Patent Act, "Whoever invents or discovers any new and useful

9 process, machine, manufacture, or composition of matter, or any new and useful improvement

10 thereof, may obtain a patent therefor . . . ." 35 U.S.C. § 101. The Supreme Court has long held

11 "that this provision contains an important implicit exception: Laws of nature, natural phenomena,

12 and abstract ideas are not patentable." *Alice Corp. Pty. Ltd.*, 573 U.S. at 216 (internal quotation

13 omitted). The reason for the exception is clear enough – "such discoveries are manifestations of . .

14 . nature, free to all men and reserved exclusively to none." *Mayo Collaborative Servs. v.*

15 *Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (citations and internal quotation marks omitted).

16 The boundaries of the exception, however, are not so clear.

17 The *Alice* court highlighted "the concern that drives this exclusionary principle as one of

18 preemption." *Alice*, 573 U.S. at 216 (noting the delicate balance inherent in promoting progress,

19 the primary object of patent law, and granting a monopoly, the means for accomplishing that

20 goal). In other words, patents that seek to wholly preempt others from using a law of nature or an

21 abstract idea – "the basic tools of scientific and technological work" – are invalid. *Id.*

22 "Accordingly, in applying the § 101 exception, we must distinguish between patents that claim the

23 buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something

24 more, thereby transform[ing] them into a patent-eligible invention." *Id.* (internal citations and

25 quotation marks omitted).

26 The *Alice* Court laid out a two-step process for assessing whether claims are patent

27 eligible. Under *Alice* step one, a court must first "determine whether the claims at issue are

28 directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. "[T]he 'directed to'

inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether their character as a whole is directed to excluded subject matter." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (internal quotation marks omitted). Although there is no bright-line rule for determining whether a claim is directed to an abstract idea, courts have articulated some guiding principles. When evaluating computer-related claims, courts may look at whether the claims "improve the functioning of the computer itself," *Alice*, 573 U.S. at 225, or whether "computers are invoked merely as a tool" to implement an abstract process. *Enfish*, 822 F.3d at 1336.

If claims are directed to a patent-ineligible concept, under *Alice* step two courts must "consider 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." *Id.* at 1334 (internal quotation marks and citations omitted). This step entails the "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." *Alice*, 573 U.S. at 218 (internal quotation marks and citations omitted). "For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of well-understood, routine [and] conventional activities previously known to the industry." *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014). "[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Id.* at 1348. However, "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

DISCUSSION

I.   *ALICE* CHALLENGE

Under the first step of the *Alice* framework, SAP argues that the '000 Patent is directed to a patent-ineligible concept; namely the display of data. SAP contends that the '000 Patent claims only a method of better displaying data produced by queries run in the existing technical

1 environment of "massively parallel databases having multiple virtual processors." As support,

2 SAP relies on the language of claim 1 discussing the "method of *presenting* an execution plan for

3 a query" comprising "*displaying* the steps of the query execution plan in a graphical user

4 interface" and "*depicting* parallel execution of steps of the query execution plan in the graphical

5 user interface," wherein "*depicting* the parallel execution of steps comprises *displaying* plural

6 elements corresponding to concurrently executing plural steps on respective processors of the

7 parallel database system." '000 Patent 12:60-66 (emphasis added).

8   SAP also points to the title and "technical field" descriptions of the Patent ("Method And

9 Apparatus For Presenting Query Plans") and the abstract (focusing on the "visual explain and

10 compare module to *display* the steps of the execution plan in a graphical user interface," parallel

11 execution of steps "can be *depicted* in the graphical user interface," "plural execution plans for a

12 given query under different conditions may be *displayed* for comparison") (emphasis added). '000

13 Patent 1:1-6; Abstract. SAP highlights the Patent figures' almost sole focus on the "visual explain

14 and compare" function and points to the text in the specification explaining the problem solved by

15 the '000 Patent ("However, as the complexity of the execution plans grows, a more sophisticated

16 mechanism is needed to *depict* query execution plans" (emphasis added)), a well as the Patent's

17 summary emphasizing the "display" and "depiction" of plans as the identified features of

18 embodiments disclosed in the Patent. *Id*. 1:57-63; 2:10-29.

19   Teradata does not dispute that *if* the inventive concept of the '000 Patent was only the

20 graphic display or depiction of optimized query results, it would be directed to a patent-ineligible

21 concept. Instead, it argues that the inventive aspects of the '000 Patent go beyond the graphical

22 display of data and include the elements of "*determining* steps of the query execution plan for a

23 parallel database system" and then displaying those results, performing this while the database is

24 running on parallel nodes of a system with virtual processors. Opposition [Dkt. No. 39] at 2.[2]

25 Teradata contends that these added elements – determining the execution plan and the required use

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[2] Both sides agree that claims 4-9, 11, 13-18, and 27 rise and fall with the analysis of claim 1.
28 Mot. at 10; Oppo. at 6 n.2.

1 of virtual processors on massive parallel systems – were necessary to improve database

2 functionality and enable a larger amount of parallelism in the parallel system.[3]

3 Other than this limited aspect of claim 1's language and one quote from the specification

4 regarding the use of virtual processors in an embodiment, Teradata relies on one portion of the

5 patent prosecution history. It points to the history where the USPTO Board of Patent Appeals

6 concluded that the claim that eventually issued as claim 1 was not obvious over prior art because

7 its last "wherein determining" step specifically required a parallel database running in a platform

8 having "plural virtual processors." 2006 Pat. App. LEXIS 2411, *14 (Comm'r Pat. & Trademarks

9 April 28, 2006). However, the claim that issued – as shown by its language as well as the

10 supporting evidence from the title, summary, and specification – was directed to the display of

11 information generated by the systems having virtual processors. That virtual processors were

12 required in the parallel database as used here to generate the data for the inventive graphical

13 display, therefore surviving a prior art challenge, does not make the inventive concepts patentable

14 under *Alice*.

15 Consideration of the elements identified in claims 19-25 of the Patent does not change the

16 outcome. Those claims describe a system adding further additional elements of implementing the

17 graphical display when "emulating" a "target" system (to assist in testing) and then displaying

18 those results graphically. The added elements, like claim 1, all rest on the innovation of using the

19 display of graphical information to explain and allow testing of the query plans.

20 The inventive concept at issue, therefore, is abstract under Alice step one.

21 At step two, SAP argues that Teradata has failed to identify any novel structures or acts for

22 performing the graphical display of information claimed. More specifically, SAP contends that

23 Teradata cannot rely on the claim language providing for a "visual explain and compare" of the

24 query results because there is no explanation of how that is effectuated. It is, according to SAP, an

25 impermissible "black box" reciting only a generic method for graphically displaying specific

26 information in a specific technical environment.

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28 [3] '000 Patent at 5:52-64 (describing the MPP in Figure 2 which "includes multiple virtual
processors . . . to more efficiently handle access requests to storage devices").

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1   Teradata responds that because the USPTO rejected the obviousness challenge to the

2   eventual claim 1 in the '000 Patent, factual findings it contends I must accept as true on this

3   motion, *Alice* step two is satisfied as a matter of law: Claim 1 relies on a non-obvious innovative

4   combination of computer elements, specifically the combination of "displaying information with

5   the inventive concepts of employing a parallel database system having virtual processors to

6   increase parallelism in the database [ ] and determining query execution plans that concurrently

7   run on multiple processors in that system to identify processor nodes that are performing sub-

8   optimally, in order to troubleshoot query performance" and doing the same with emulated data for

9   a target database. Oppo. at 12-13. The structures to be used are, according to Teradata, the

10 database servers programmed to use virtual processors and "displays" for the required content for

11 claim 1and "specialized controllers" to perform the emulation required by claims 19-25. Oppo. at

12 13.

13   SAP responds that the "innovative" structures that Teradata is relying on under step two

14 are the same as Teradata relied on at step one and, as discussed above, are *not* the inventions

15 covered by the claim language but inventions otherwise existing at the time. SAP argues that the

16 use of virtual processors was not innovative. The "controller" is a generic data object extractor

17 and itself is not innovative and whose functionality is not otherwise adequately described. As to

18 the language in the USPTO's appeal finding the use of the "virtual processors" and "emulated

19 data" innovative (and not obvious under prior art), SAP notes that those elements were being

20 interpreted within a patent whose aim was the "graphical display" of the query plan information

21 and that the Board was not considering the concerns of *Alice* (which was issued many years later).

22   I agree with SAP. The issuance of the '000 Patent against an obviousness challenge does

23 not resolve the *Alice* issue or otherwise bind my determination here. The problem remains that the

24 inventive concepts Teradata itself points to – the use of the virtual processors and the "controller"

25 – are not themselves captured by the claim language or described in the specification. The use of

26 these devices to source the information for the inventive concept of the graphical display does not

27 save this Patent from the *Alice* challenge.

28   In support of its position that the concept here was inventive and survives *Alice*, Teradata

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1   relies on *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). There, the

2   Federal Circuit found that despite an "abstract idea" under step one of *Alice*, step two was satisfied

3   where "patent claims call for an 'outsource provider' having a web server which directs the visitor

4   to an automatically-generated hybrid web page that combines visual 'look and feel' elements from

5   the host website and product information from the third-party merchant's website related to the

6   clicked advertisement." *Id*. at 125. Because the patent's claims include "additional features" that

7   ensure the claims are "more than a drafting effort designed to monopolize the [abstract idea],"

8   under *Alice*, the court concluded "[t]he claimed solution amounts to an inventive concept for

9   resolving this particular Internet-centric problem, rendering the claims patent-eligible." *Id*. at

10   1259.

11   But *DDR* helps Teradata only if the Patent's claim themselves describe a particular

12   solution that is itself innovative or an application of an abstract idea that is innovative and whose

13   innovative application is implemented through the claim language (as shown by the embodiments)

14   with sufficient description. *See, e.g., Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350,

15   1354 (Fed. Cir. 2016) ("we have recognized that merely presenting the results of abstract

16   processes of collecting and analyzing information, without more (such as identifying a particular

17   tool for presentation), is abstract as an ancillary part of such collection and analysis.").

18   Looking at the claim language, and then the specification including the figures and

19   descriptions of the embodiments, the innovation is the use of the *graphical interface* to improve

20   the ease of development, testing, and running of the massively parallel databases using virtual

21   processors. While that interface was deployed to help develop and analyze information running in

22   the massively parallel databases using virtual processors, the operation of the virtual processors

23   and controllers are *not* explained and demonstrated in this patent, they are assumed. Nor is the

24   particular operation of the graphical interface itself anything more than a generic description or

25   "black box" requiring the display of the information. This case, therefore, is more like *Electric*

26   *Power Group, LLC*. There, the patent covered a method for gathering, analyzing, and displaying

27   power-grid information but because the claims did not "include any requirement for performing

28   the claimed functions of gathering, analyzing, and displaying in real time by use of anything but

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1   entirely conventional, generic technology," they were patent-ineligible. *Electric Power Group,*

2   *LLC*, 830 F.3d at 1356; *see also id.* at 1355 ("The claims at issue here do not require an arguably

3   inventive device or technique for displaying information, unlike the claims at issue in *DDR*

4   *Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (at JMOL stage finding

5   inventive concept in modification of conventional mechanics behind website display to produce

6   dual-source integrated hybrid display).").

7   Finally, Teradata argues that the question of the inventiveness of the Patent should not be

8   decided now, at the motion to dismiss stage, relying on *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d

9   1306 (Fed. Cir. 2019), *cert. denied sub nom. Garmin USA, Inc. v. Cellspin Soft, Inc.*, 140 S. Ct.

10   907 (2020). There, the federal circuit noted that "[a]s long as what makes the claims inventive is

11   recited by the claims, the specification need not expressly list all the reasons why this claimed

12   structure is unconventional. In this case, Cellspin made specific, plausible factual allegations

13   about why aspects of its claimed inventions were not conventional, *e.g.*, its two-step, two-device

14   structure requiring a connection before data is transmitted. The district court erred by not

15   accepting those allegations as true." *Id.* at 1317-18. There is a different problem here. The

16   stretched innovative concepts Teradata is claiming on this motion extends beyond and are not

17   captured by the claim language and are without support in the specification.

18   SAP's motion to dismiss based on *Alice* is GRANTED.

19   **II.   INDIRECT INFRINGEMENT**

20   SAP also challenges the adequacy of Teradata's indirect infringement allegations with

21   respect to all five patents in suit, arguing that Teradata fails to adequately allege SAP's

22   "knowledge" that the accused actions infringe Teradata's patents and that SAP "specifically

23   intended" to induce infringement of the patents. *See Global-Tech Appliances, Inc. v. SEB S.A.*,

24   563 U.S. 754, 763, 765–66 (2011) ("[A] violator of § 271(c) must know 'that the combination for

25   which his component was especially designed was both patented and infringing'" and "induced

26   infringement under § 271(b) requires knowledge that the induced acts constitute patent

27   infringement") (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 488

28   (1964)); *Superior Indus., LLC v. Thor Glob. Enterprises Ltd.*, 700 F.3d 1287, 1296 (Fed. Cir.

1   2012) (requiring specific intent to induce infringement).

2   SAP points out that for the '419 and '623 patents, the FAC does not allege that SAP knew

3   of them before the filing of the original Complaint, and therefore the knowledge and intent

4   allegations are missing. For the '357 and '000 patents, SAP argues the FAC's "thin allegations of

5   possible pre-suit knowledge" are insufficient to show both the knowledge and intent elements.

6   For the '932 patent, SAP admits knowledge is adequately alleged but contends the specific intent

7   allegations are lacking.

8   Teradata responds that it has adequately alleged SAP had pre-suit knowledge of the '357

9   and '000 patents because those patents were cited by SAP as prior art (albeit to a SAP subsidiary

10   and predecessor in interest, respectively) and notes the '923 patent because it was cited in SAP's

11   own litigation against Teradata. I conclude that these allegations – along with Teradata's specific

12   allegations regarding SAP's general knowledge of Teradata's technology given the parties'

13   business relationship as partners in the Bridge Project through which SAP allegedly stole

14   Teradata's trade secrets—are sufficient to plead pre-suit knowledge for the '357, '000, and '923

15   patents. *See* FAC ¶¶ 18-20, 24, 58, 77.

16   Teradata also contends that, under caselaw from this District (including my prior

17   opinions), post-suit knowledge of all five of the asserted patents is established by the original

18   complaint filed in this action in August 2020. *See, e.g., Illumina, Inc. v. BGI Genomics Co., Ltd.*,

19   19-CV-03770-WHO, 2020 WL 571030, at *7 (N.D. Cal. Feb. 5, 2020). SAP asks me to

20   reconsider this position, but I decline to do so. Pre-suit knowledge has been adequately alleged

21   for the '357, '000, and '923 patents and post-suit knowledge has been alleged for all of the patents

22   at issue.

23   As to specific intent, Teradata points to its allegations that SAP instructed its users to run

24   and test SAP Hana consistent with SAP's manuals, thereby performing the claimed methods and

25   that SAP encouraged its customers to run SAP Hana in the United States through advertisements,

26   marketing, and product support efforts. FAC ¶¶ 28, 59, 67, 81, 95. These specific allegations are

27   sufficient. *See id.*, 2020 WL 571030 at *6 (party allegedly "provides customers with marketing

28   materials, user guides, technical literature, and [] software applications that encourage infringing

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use," and "Courts have regularly found such allegations to be adequate").

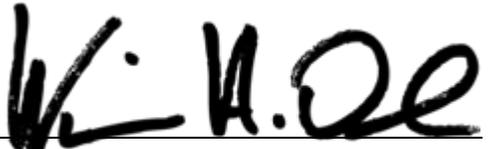The motion to dismiss the indirect infringement allegations in the FAC is DENIED.

CONCLUSION

SAP's motion to dismiss the claims of the '000 Patent as patent-ineligible is GRANTED. SAP's motion to dismiss the indirect infringement claims is DENIED.

IT IS SO ORDERED.

Dated: February 1, 2021

William H. Orrick
United States District Judge

United States District Court
Northern District of California