1

2

3

4   UNITED STATES DISTRICT COURT

5   NORTHERN DISTRICT OF CALIFORNIA

6

7   FRANCE TELECOM S.A.,
                                              Case No. 12-cv-04967-WHO
              Plaintiff,
8
         v.
9   **ORDER ON MARVELL'S MOTION
                                              FOR SUMMARY JUDGMENT**
     MARVELL SEMICONDUCTOR INC.,
10   Re: Dkt. No. 137
              Defendant.
11

12

13   Defendant Marvell Semiconductor, Inc. ("Marvell"), moves for summary judgment that

14   U.S. Patent 5,446,747 ("the '747 Patent") is invalid because Claims 1 and 10 are merely

15   mathematical algorithms or abstract ideas, and are not transformative or limited applications of

16   those algorithms or ideas, and therefore fail to claim patent-eligible subject matter under 35 U.S.C.

17   § 101. Marvell also seeks partial summary judgment on the issue of whether it is liable to plaintiff

18   France Telecom S.A. ("France Telecom") for sales of allegedly infringing chips[1] sold abroad by a

19   non-party affiliate, Marvell Asia Pte. Ltd. ("MAPL"). Because Claims 1 and 10 recite an

20   application of an abstract idea, rather than an abstract idea alone, Marvell's motion for summary

21   judgment to invalidate the claims is DENIED. Because France Telecom cannot seek damages

22   based on a third party's infringement outside the United States, Marvell's motion for partial

23   summary judgment concerning its liability for the accused chips is GRANTED.

24   **BACKGROUND**

25   **I.   THE '747 PATENT**

26   The '747 Patent "involves methods commonly referred to as 'turbo coding' for correcting

27   _____

28   [1] I will refer to the subset of products for which Marvell seeks partial summary judgment the
     "accused chips."

errors in telecommunication and other data transmissions." France Telecom, S.A. v. Marvell

Semiconductor, Inc., No. 12-cv-4967, 2014 WL 1007449, at *1 (N.D. Cal. Mar. 12, 2014). The

technology claimed allows for more accurate and efficient data transmission and cellular

communication. See id. at *3. The patent expired on August 29, 2012. See Rycroft Decl. (Dkt.

No. 137) Ex. 1; 35 U.S.C. § 154(a)(2).

Claim 1 of the patent recites the following:

1. A method for error-correction coding of source digital data elements, comprising the steps of:

implementing at least two independent and parallel steps of systematic convolutional coding, each of said coding steps taking account of all of said source data elements and providing parallel outputs of distinct series of coded data elements;

and temporally interleaving said source data elements to modify the order in which said source data elements are taken into account for at least one of said coding steps.

'747 Patent 14:46-56.

Claim 10 is dependent on Claim 1 and recites the following:

10. A method for decoding received digital data elements representing source data elements coded according to the coding method of claim 1, wherein said decoding method comprises an iterative decoding procedure comprising the steps of:

in a first iteration, combining each of said received digital data elements with a predetermined value to form an intermediate data element,

decoding the intermediate data element representing each received data element to produce a decoded data element,

estimating said source data element, by means of said decoded data element, to produce an estimated data element,

and for all subsequent iterations, combining each of said received data elements with one of said estimated data elements estimated during a preceding iteration.

'747 Patent 15:15-42.

II.   THE SALE OF ACCUSED CHIPS

MAPL is a Singapore corporation with operations based in Singapore. Matukaitis Decl.

¶ 10. Marvell and MAPL are both subsidiaries of Marvell Technology Group, Ltd. ("MTGL").

2

1   Matukaitis Decl. ¶ 11. Neither MAPL nor MTGL are defendants in this action. MAPL, like

2   Marvell, does not manufacture its own semiconductors. Rather, its chips are manufactured by

3   third-parties primarily based in ███████████████. Matukaitis Decl. ¶ 12. MAPL's customers

4   submit purchase orders to MAPL ██████████, the chips are then manufactured ██████ and

5   delivered to MAPL's customers. See Matukaitis Decl. ¶¶ 12-13. ████████████████████████

6   ██

7   ██. Matukaitis

8   Decl. ¶ 16. According to MAPL's standard terms and conditions for purchases, ████████████

9   ██

10   ████████████████████████████████████

11   Rycroft Decl. Ex. 3; Matukaitis Decl. ¶ 13.

12   France Telecom's damages consultant, Bradford Cornell, argues that Marvell may be liable

13   for royalties exceeding ██████████ units. Mot. (Dkt. No. 135-4) 6. Marvell contends, however,

14   that ██████████ of those units were produced and sold by MAPL abroad and should therefore be

15   excluded from the damages calculation.

16   **PROCEDURAL HISTORY**

17   France Telecom filed this action on June 26, 2012, in the United States District Court for

18   the Southern District of New York. Dkt. No. 1. On September 24, 2012, the action was

19   transferred to this Court. Dkt. No. 30. On February 27, 2014, Marvell filed this motion. Dkt. No.

20   135. On March 12, 2014, I issued a Markman order construing certain disputed terms. Dkt. No.

21   141. A hearing was held on this motion on April 9, 2014.

22   **LEGAL STANDARD**

23   Summary judgment is proper "if the pleadings, the discovery and disclosure materials on

24   file, and any affidavits show that there is no genuine issue as to any material fact and that the

25   movant is entitled to judgment as a matter of law." FED. R. CIV. P. 56(a). The moving party bears

26   the initial burden of demonstrating the absence of a genuine issue of material fact. Celotex Corp.

27   v. Catrett, 477 U.S. 317, 323 (1986). In deciding a summary judgment motion, the court must

28   view the evidence in the light most favorable to the non-moving party and draw all justifiable

1 inferences in its favor. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986).

2 The Patent Act explicitly states, "A patent shall be presumed valid." 35 U.S.C. § 282.

3 "[A]ny attack on an issued patent based on a challenge to the eligibility of the subject matter"

4 requires a "high level of proof." Ultramercial, Inc. v. Hulu, LLC, 722 F.3d 1335, 1342 (Fed. Cir.

5 2013). "[A] moving party seeking to invalidate a patent at summary judgment must submit such

6 clear and convincing evidence of facts underlying invalidity that no reasonable jury could find

7 otherwise." SRAM Corp. v. AD-II Eng'g, Inc., 465 F.3d 1351, 1357 (Fed. Cir. 2006).

8 **DISCUSSION**

9 **I.   INVALIDITY**

10 Marvell argues that the claims in the '747 Patent "recite nothing more than an algorithm

11 for error correction coding that comprises only algorithmic steps, unconnected to any structure or

12 specific application." Reply (Dkt. No. 148-3) 1 (emphasis omitted). Specifically, Marvell says,

13 "This motion is based on the fact that the claims cover only an abstract idea." Mot. 7 n.5.

14 Therefore, Marvell concludes, it is not patent eligible under 35 U.S.C. § 101.

15 **A. Section 101 Of The Patent Act**

16 The question of whether subject matter is patent-eligible, "while ultimately a legal

17 determination, is rife with underlying factual issues." Ultramercial, 722 F.3d at 1339. Section

18 101 of the Patent Act sets forth categories of patent-eligible subject matter and states, "Whoever

19 invents or discovers any new and useful process, machine, manufacture, or composition of matter,

20 or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions

21 and requirements of this title." 35 U.S.C. § 101. "In choosing such expansive terms . . . Congress

22 plainly contemplated that the patent laws would be given wide scope." Diamond v. Chakrabarty,

23 447 U.S. 303, 308 (1980). "Congress took this permissive approach to patent eligibility to ensure

24 that ingenuity should receive a liberal encouragement." Bilski v. Kappos, 130 S. Ct. 3218, 3225

25 (2010) (citation and internal punctuation omitted).

26 The Act defines "process" as an "art or method, and includes a new use of a known

27 process, machine, manufacture, composition of matter, or material." 35 U.S.C. § 100. "A process

28 is a mode of treatment of certain materials to produce a given result. It is an act, or a series of

4

1 acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.

2 If new and useful, it is just as patentable as is a piece of machinery." Diamond v. Diehr, 450 U.S.

3 175, 183 (1981) (quoting Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)).

4 "The [Supreme] Court's precedents provide three specific exceptions to § 101's broad

5 patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas.'" Bilski,

6 130 S. Ct. at 3225. "The concepts covered by these exceptions are 'part of the storehouse of

7 knowledge of all men . . . free to all men and reserved exclusively to none.'" Id. (quoting Funk

8 Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948)). "The [Supreme] Court has

9 recognized, however, that too broad an interpretation of this exclusionary principle could

10 eviscerate patent law. For all inventions at some level embody, use, reflect, rest upon, or apply

11 laws of nature, natural phenomena, or abstract ideas." Mayo Collaborative Servs. v. Prometheus

12 Labs., Inc., 132 S. Ct. 1289, 1293 (2012).

13 A process that recites nothing more than an abstract idea is not patent-eligible. Bilski, 130

14 S. Ct. at 3229-30. As the Federal Circuit has noted, "Defining 'abstractness' has presented

15 difficult problems, particularly for the § 101 'process' category." Ultramercial, 722 F.3d at 1342.

16 "Members of both the Supreme Court and [the Federal Circuit] have recognized the difficulty of

17 providing a precise formula or definition for the abstract concept of abstractness." Id. at 1343.

18 **B. Case Law On Patent Eligibility**

19 There are three central cases that the Supreme Court has highlighted as "guideposts" when

20 considering the exceptions to patent subject matter eligibility under 35 U.S.C. § 101. Bilski, 130

21 S. Ct. at 3231. Two recent opinions by the Court have attempted to apply the principles

22 articulated in the seminal cases. I review these cases in turn.

23 **1. Gottschalk v. Benson**

24 In Gottschalk v. Benson, 409 U.S. 63 (1972), the Supreme Court held that an algorithm for

25 converting binary-coded decimal numerals into pure binary code was not a patent-eligible

26 "process" because the claim was "so abstract and sweeping" that it could cover usage in a variety

27 of other settings and be performed by any existing or future machinery, or without machinery at

28 all. The Court explained that a "principle" "is a fundamental truth; an original cause; a motive,"

5

1   and thus cannot be patented. Id. at 67 (quoting Le Roy v. Tatham, 55 U.S. 156, 175 (1852)).

2   "[M]ental processes[ ] and abstract intellectual concepts are not patentable, as they are the basic

3   tools of scientific and technological work." Id. These unpatentable items include algorithms, i.e.,

4   "procedure[s] for solving a given type of mathematical problem." Id. at 65; Diehr, 450 U.S. at

5   186 ("an algorithm, or mathematical formula, is like a law of nature, which cannot be the subject

6   of a patent"). In Benson, "the 'process' claim [was] so abstract and sweeping as to cover both

7   known and unknown uses." Benson, 409 U.S. at 68. Because the formula for converting binary-

8   coded decimal numerals to pure binary numerals was an abstract idea and "[t]he mathematical

9   formula involved has no substantial practical application except in connection with a digital

10   computer . . . the patent [if found valid] would wholly pre-empt the mathematical formula and in

11   practical effect would be a patent on the algorithm itself." Id. at 71-72. The Court therefore held

12   that the algorithm was not a "process" eligible for patenting.

2. Parker v. Flook

14   In Parker v. Flook, 437 U.S. 584 (1978), the Supreme Court considered a procedure for

15   monitoring the catalytic conversion process in the petrochemical and oil-refining industries and

16   held that the claim was not patent eligible because it was too abstract. The claim consisted of

17   three steps: "an initial step which merely measures the present value of the process variable (e.g.,

18   the temperature); an intermediate step which uses an algorithm to calculate an updated alarm-limit

19   value; and a final step in which the actual alarm limit is adjusted to the updated value." Id. at 585.

20   The application's only novel feature was reliance on a mathematical algorithm otherwise

21   implemented by a computer. Id. at 588.

22   The Court noted that "[t]he line between a patentable 'process' and an unpatentable

23   'principle' is not always clear." Id. at 589. But while the applicant argued that the mathematical

24   formula was limited to the petrochemical and oil-refining industries, and "the presence of specific

25   'post-solution' activity . . . distinguishes this case from Benson and makes [the] process

26   patentable," the Court rejected "[t]he notion that post-solution activity, no matter how

27   conventional or obvious in itself, can transform an unpatentable principle into a patentable

28   process." Id. at 590. The Court made clear that while "a process is not unpatentable simply

1   because it contains a law of nature or a mathematical algorithm," the "proper analysis" is whether

2   "[t]he process itself, not merely the mathematical algorithm," is "new and useful." Id. at 590-91.

3   It does not matter that the formula was newly conceived because "[w]hether the algorithm was in

4   fact known or unknown at the time of the claimed invention, as one of the 'basic tools of scientific

5   and technological work, it is treated as though it were a familiar part of the prior art." Id. at 591-

6   92 (citation omitted). In essence, the Court held that "a claim [merely] for an improved method of

7   calculation, even when tied to a specific end use, is unpatentable subject matter under § 101." Id.

8   at 595 n.18. But "[e]ven though a phenomenon of nature or mathematical formula may be well

9   known, an inventive application of the principle may be patented. Conversely, the discovery of

10   such a phenomenon cannot support a patent unless there is some other inventive concept in its

11   application." Id. at 594 (emphasis added).

3. Diamond v. Diehr

13   In the last case of the trio, Diamond v. Diehr, 450 U.S. 175 (1981), the Supreme Court

14   reviewed a patent for "a process for molding raw, uncured synthetic rubber into cured precision

15   products," and concluded that it was patent-eligible because the process combined an abstract

16   formula with practical steps and limitations. The process involved constantly measuring the

17   temperature inside the mold, automatically feeding the temperatures into a computer which

18   repeatedly calculated the necessary cure time using the "Arrhenius equation" (an established

19   mathematical formula), and opening the press when the elapsed cure time matched the calculated

20   necessary cure time. The Court found the process patentable because although it involved an

21   abstract mathematical formula, the formula was integrated with a novel set of steps to be followed

22   in a particular application. Although the patent "employ[ed] a well-known mathematical equation,

23   [it did] not seek to pre-empt the use of that equation. Rather, [the applicant sought] only to

24   foreclose from others the use of that equation in conjunction with all of the other steps in their

25   claimed process." Id. at 187 (emphasis added).

26   In finding the patent eligible, the Court reasoned that "a claim drawn to subject matter

27   otherwise statutory does not become nonstatutory simply because it uses a mathematical formula"

28   because "an application of a law of nature or mathematical formula to a known structure or

7

1 process may well be deserving of patent protection." Id. Further, "In determining the eligibility

2 of [a] claimed process for patent protection under § 101, their claims must be considered as a

3 whole." Id. at 188. "This is particularly true in a process claim because a new combination of

4 steps in a process may be patentable even though all the constituents of the combination were well

5 known and in common use before the combination was made." Id.

6   The Court reiterated that "[a] mathematical formula as such is not accorded the protection

7 of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the

8 formula to a particular technological environment. Similarly, insignificant post-solution activity

9 will not transform an unpatentable principle into a patentable process." Id. at 191-92 (citations

10 omitted). But the Court concluded, "[W]hen a claim containing a mathematical formula

11 implements or applies that formula in a structure or process which, when considered as a whole, is

12 performing a function which the patent laws were designed to protect (e.g., transforming or

13 reducing an article to a different state or thing), then the claim satisfies the requirements of § 101."

14 Id. at 192. So long as a claim is not "an attempt to patent a mathematical formula, but rather [is]

15 drawn to [a] process," it is patent eligible. Id.

16   **4. Bilski v. Kappos**

17   More recently, the Supreme Court in Bilski v. Kappos, 130 S. Ct. 3218 (2010), looked to

18 the preceding cases and invalidated as abstract a patent that claimed a general method for hedging

19 risk in the energy commodities market. There, "Claim 1 [of the patent] describe[d] a series of

20 steps instructing how to hedge risk. Claim 4 put[ ] the concept articulated in claim 1 into a simple

21 mathematical formula. . . . The remaining claims explain[ed] how claims 1 and 4 can be applied to

22 allow energy suppliers and consumers to minimize the risks resulting from fluctuations in market

23 demand for energy." Id. at 3224.

24   As an initial matter, the Supreme Court considered the Federal Circuit's holding that the

25 "machine-or-transformation [("MOT")] test . . . is the governing test for determining patent

26 eligibility of a process under § 101." In re Bilski, 545 F.3d 943, 956 (Fed. Cir. 2008). Under the

27 Federal Circuit's formulation, "A claimed process is surely patent-eligible under § 101 if: (1) it is

28 tied to a particular machine or apparatus, or (2) it transforms a particular article into a different

8

1 state or thing." Id. at 954.

2 In reviewing the Federal Circuit's decision, the Supreme Court observed, "It is true that

3 patents for inventions that did not satisfy the machine-or-transformation test were rarely granted in

4 earlier eras, especially in the Industrial Age . . . . But times change." Id. (citation omitted). This is

5 because "[w]hile machine-or-transformation logic served well as a tool to evaluate the subject

6 matter of Industrial Age processes, that test has far less application to the inventions of the

7 Information Age." Ultramercial, 722 F.3d at 1343. "[T]he machine-or-transformation test is a

8 useful and important clue, an investigative tool, for determining whether some claimed inventions

9 are processes under § 101," but the Supreme Court held that it "is not the sole test for deciding

10 whether an invention is a patent-eligible 'process.'" Bilski, 130 S. Ct. at 3227. "[T]here are

11 reasons to doubt whether the test should be the sole criterion for determining the patentability of

12 inventions in the Information Age . . . [because] the machine-or-transformation test would create

13 uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and

14 inventions based on linear programming, data compression, and the manipulation of digital

15 signals." Id. Accordingly, the Court held that the Federal Circuit incorrectly concluded that the

16 "machine or transformation" test is the exclusive test for what constitutes a "process" under

17 Section 101. 130 S. Ct. at 3226.

18 Based on Benson, Flook, and Diehr, the Court concluded that the claims were not

19 patentable processes because they were attempts to patent abstract ideas. Id. at 3229-30. Because

20 hedging is "a fundamental economic practice long prevalent in our system of commerce and

21 taught in any introductory finance class," it "is an unpatentable abstract idea, just like the

22 algorithms at issue in Benson and Flook. Allowing petitioners to patent risk hedging would pre-

23 empt use of this approach in all fields, and would effectively grant a monopoly over an abstract

24 idea." Id. at 3231. The Court also rejected the remaining claims at issue because they were

25 "broad examples of how hedging can be used in commodities and energy markets." Id.

26 **5. Mayo Collaborative Services v. Prometheus Laboratories, Inc.**

27 Finally, in Mayo Collaborative Services v. Prometheus Laboratories, Inc., 132 S. Ct. 1289

28 (2012), the Supreme Court held as ineligible claims covering a process to aid doctors in

9

1 administering the proper dosage of thiopurine drugs to treat patients with autoimmune disease. In

2 invalidating them, the Court observed that the claims "set forth laws of nature—namely,

3 relationships between concentrations of certain metabolites in the blood and the likelihood that a

4 dosage of a thiopurine drug will prove ineffective or cause harm." Id. at 1296. It said that the

5 proper inquiry is whether the claims "claims add enough to their statements of the correlations to

6 allow the processes they describe to qualify as patent-eligible processes that apply natural laws."

7 Id. at 1297. The Court reasoned, "If a law of nature is not patentable, then neither is a process

8 reciting a law of nature, unless that process has additional features that provide practical assurance

9 that the process is more than a drafting effort designed to monopolize the law of nature itself." Id.

10 The problem was that "the claims [only] inform a relevant audience about certain laws of nature;

11 [the] additional steps consist of well-understood, routine, conventional activity already engaged in

12 by the scientific community, [which] add nothing significant beyond the sum of their parts taken

13 separately." Id. at 1298.

14   The Court explained, "a process that focuses upon the use of a natural law [must] also

15 contain other elements or a combination of elements, sometimes referred to as an 'inventive

16 concept,' sufficient to ensure that the patent in practice amounts to significantly more than a patent

17 upon the natural law itself." Id. at 1294. The patent in Mayo Collaborative Services did not meet

18 that standard. Accordingly, "upholding the patents would risk disproportionately tying up the use

19 of the underlying natural laws, inhibiting their use in the making of further discoveries." Id.

20   **6. Summary Of Case Law**

21   "An abstract idea is one that has no reference to material objects or specific examples—

22 i.e., it is not concrete." Ultramercial, 722 F.3d at 1343. The Federal Circuit succinctly explains,

23 "A claim can embrace an abstract idea and be patentable. Instead, a claim is not patent eligible

24 only if, instead of claiming an application of an abstract idea, the claim is instead to the abstract

25 idea itself. The inquiry here is to determine on which side of the line the claim falls: does the

26 claim cover only an abstract idea, or instead does the claim cover an application of an abstract

27 idea?" Id. (citing Benson, Diehr, and Bilski). "[T]he relevant inquiry is whether a claim, as a

28 whole, includes meaningful limitations restricting it to an application, rather than merely an

10

abstract idea." Id.; Accenture Global Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336,

1345 (Fed. Cir. 2013) (Lourie, J.) (citing Ultramercial, 722 F.3d at 1344). As the Federal Circuit

summarized in a plurality[2] en banc opinion,

> The first question is whether the claimed invention fits within one of the four statutory
> classes set out in § 101. Assuming that condition is met, the analysis turns to the judicial
> exceptions to subject-matter eligibility. A preliminary question in applying the exceptions
> to such claims is whether the claim raises § 101 abstractness concerns at all. Does the
> claim pose any risk of preempting an abstract idea? In most cases, the answer plainly will
> be no.

CLS Bank Int'l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1282 (Fed. Cir. 2013), cert. granted, 134

S. Ct. 734 (2013).[3] "Where bona fide § 101 concerns arise, however, it is important at the outset

to identify and define whatever fundamental concept appears wrapped up in the claim so that the

subsequent analytical steps can proceed on a consistent footing." Id. at 1282.

"With the pertinent abstract idea identified, the balance of the claim can be evaluated to

---

[2] The Federal Circuit has not conclusively decided what analysis applies in patent eligibility cases concerning process claims. The analysis outlined in the five-judge plurality opinion of CLS Bank by Judge Lourie has been called the "integrated approach," Planet Bingo, LLC v. VKGS, LLC, 961 F. Supp. 2d 840, 844 (W.D. Mich. 2013), and has been applied in a subsequent Federal Circuit case, see Accenture Global Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336 (Fed. Cir. 2013) (Lourie, J.). Senior Judge Bryson of the Federal Circuit, who did not take part in CLS Bank, recently applied the "integrated approach" when he was sitting by designation on a district court. TQP Dev., LLC v. Intuit Inc., No. 12-cv-180, 2014 WL 651935, at *2 (E.D. Tex. Feb. 19, 2014). At least one district judge has expressly adopted this approach. See Planet Bingo, 961 F. Supp. 2d at 845.

On the other hand, in his partial dissent in CLS Bank, Chief Judge Rader outlined what has been called the "meaningful limitations" test, for which he was joined by three other judges. CLS Bank *Int'l*, 717 F.3d at 1292; Planet Bingo, 961 F. Supp. 2d at 844. (One remaining judge, Judge Newman, wrote his own opinion.) Chief Judge Rader later applied this test when he was part of the two-judge majority in Ultramercial, Inc. v. Hulu, LLC, 722 F.3d 1335 (Fed. Cir. 2013). Judge Lourie was part of the Ultramercial panel, but concurred in the result only and argued that his analysis in CLS Bank was more faithful to Supreme Court precedent. One district judge appears to have applied the "meaningful limitations" test but did not address the "integrated approach." See C*lear with Computers, LLC v. Dick'*s Sporting Goods, Inc., No. 12-cv-674, 2014 WL 923280 (E.D. Tex. Jan. 21, 2014).

Neither party has addressed this issue or sought to apply either analysis. Nonetheless, given that more judges of the Federal Circuit were persuaded by Judge Lourie's opinion, I will apply his analysis here. But like the court in Lumen View Tech. LLC v. Findthebest.com, Inc., No. 13-cv-3599, 2013 WL 6164341, at *8 (S.D.N.Y. Nov. 22, 2013), my conclusion remains the same under either analysis: even under Chief Judge Rader's test, I find that Claims 1 and 10 of the '747 Patent places meaningful limitations on the abstract idea claimed.
[3] This case was appealed to the Supreme Court, which heard argument on March 31, 2014. The Court has not issued an opinion yet.

determine whether it contains additional substantive limitations that narrow, confine, or otherwise

tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." Id.

This requires identifying an "inventive concept," i.e., "a genuine human contribution to the

claimed subject matter" or "a product of human ingenuity." Id. at 1283. The analysis "centers on

the practical, real-world effects of the claim"—"[l]imitations that represent a human contribution

but are merely tangential, routine, well-understood, or conventional, or in practice fail to narrow

the claim relative to the fundamental principle therein, cannot confer patent eligibility." Id. False

limitations include steps that are "necessary to every practical use of what it found to be a natural

law"; "well-understood, routine, conventional activity previously engaged in by researchers in the

field"; "vague limitations cast in 'highly general language'"; and "token or trivial limitations." Id.

(citations omitted).

A patent-eligible claim must include elements that add "significantly more" to the basic

principle. Mayo Collaborative Servs., 132 S. Ct. at 1297. Methods that "claim[ ] a mental process

standing alone and untied to another category of statutory subject matter" are unpatentable, "even

when a practical application [is] claimed." In re Comiskey, 554 F.3d 967, 980 (Fed. Cir. 2009).

"The eligibility exclusion for purely mental steps is particularly narrow." Ultramercial, LLC v.

Hulu, LLC, 657 F.3d 1323, 1329-30 (Fed. Cir. 2011), judgment vacated on other grounds sub

nom. WildTangent, Inc. v. Ultramercial, LLC, 132 S. Ct. 2431 (2012). Any alleged abstractness

"should exhibit itself so manifestly as to override the broad statutory categories of eligible subject

matter" under patent law. Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859, 868 (Fed.

Cir. 2010). Claims "with specific applications or improvements to technologies in the

marketplace are not likely to be so abstract that they override the statutory language and

framework of the Patent Act." Id. at 869.

7. Application of Law

I conclude that Marvell has not shown that it is entitled to judgment as a matter of law that

Claims 1 and 10 of the '747 Patent are not patent-eligible under 35 U.S.C. § 101. As noted above,

the '747 Patent is presumed to be valid under the patent laws, and Marvell must provide a "high

level of proof" to invalidate its claims. Ultramercial, 722 F.3d at 1342. Marvell's burden is to do

1 so by clear and convincing evidence, and it has not succeeded.

2 CLS Bank requires that I first ask whether what is claimed fits within one of the four

3 statutory classes set out in § 101. 717 F.3d at 1282. They do. Claim 1 recites "[a] method for

4 error-correction coding" and Claim 10 recites "[a] method for decoding received digital data

5 elements." '747 Patent 14:46, 15:25-26 (emphases added). Because "methods" fall under the

6 definition of "process," the claims here are patent-eligible under 35 U.S.C. § 101 unless an

7 exception applies. 35 U.S.C. § 100.

8 The next question is whether what is claimed fits within one of the three judicially created

9 limits on Section 101: is what is claimed a law of nature, natural phenomenon, or an abstract idea

10 and thus excluded from patent eligibility? Id. at 1277. "Where bona fide § 101 concerns

11 arise . . . it is important at the outset to identify and define whatever fundamental concept appears

12 wrapped up in the claim so that the subsequent analytical steps can proceed on a consistent

13 footing." Id. at 1282. Claims 1 and 10 of the '747 Patent do raise "§ 101 concerns." In particular,

14 both involve abstract ideas. Claim 1 relates to "error-correction coding" and Claim 10 relates to

15 "decoding." Neither has "reference to material objects or specific examples," so they are "not

16 concrete" and are abstract ideas. [4] Ultramercial, 722 F.3d at 1343.

17 Where the patent involves abstract ideas, the animating concern is whether the claims at

18 issue are drawn such that they would preempt the abstract ideas invoked.[5] A court "must look for

19 meaningful limitations that prevent the claim as a whole from covering the concept's every

20

---

21 [4] Throughout its briefing, Marvell mainly argues that the claims are invalid because they cover
22 only mathematical ideas or algorithms. Mot. 1. Marvell has not adequately explained how the
    claims at issue are mathematical formulae or algorithms. However, I will construe Marvell's
23 argument to mean that the claims are nothing more than abstract ideas.
    [5] Marvell asserts that the abstract idea of the challenged claims "is the combination of specific
24 algorithmic steps recited in Claims 1 and 10—parallel systematic convolutional coding steps
    where one of the steps uses interleaving to change the order of the data elements being coded and
25 an iterative decoding method where data elements are combined (calculated) with other values,
    decoded, and an estimated value is calculated." Reply 4. Based on this formulation, Marvell
26 argues that the claims do not add limits to narrow or tie down the claim. Reply 4. While the
    Federal Circuit has recognized that identifying an abstract idea can be difficult, Ultramercial, 722
27 F.3d at 1342-43, and defining the scope of the idea will undoubtedly affect the analysis of whether
    the claims at issue are patent eligible, Marvell essentially asserts that the entirety of Claims 1 and
28 10 is the abstract idea without explaining why that is the case. This is insufficient to meet the
    "high level of proof" needed to succeed on this motion. Id. at 1342.

1   practical application." *CLS Bank Int'l*, 717 F.3d at 1281. Here, neither Claim 1 nor Claim 10

2   fully preempts the abstract idea of "error-correction coding" or "decoding digital data elements."

3   A close look at the claims shows that they "contain[ ] additional substantive limitations that

4   narrow, confine, or otherwise tie down the claim so that, in practical terms, [the claims do] not

5   cover the full abstract idea itself." Id. at 1282.

6   The claims at issue are worth reviewing. Claim 1 discloses "[a] method for error-

7   correction coding of source digital data elements"—not error correction coding generally—and

8   contains two steps. The first step itself includes "two independent and parallel steps of

9   convolutional coding, each of said coding steps taking account of all of said source data

10   elements." Each step then "provid[es] parallel outputs of distinct series of coded data elements."

11   During claim construction, I construed "convolutional coding" as "coding that associates to each

12   source data element at least one coded data element which is a combination of the source data

13   element and at least one previous source data element," France Telecom, 2014 WL 1007449, at

14   *3, and "systematic convolutional coding" as "convolutional coding where the output includes

15   both the coded data and the current input data," id. at *5. By adopting Marvell's proposed

16   construction for "systematic convolutional coding," I rejected France Telecom's argument that

17   source data elements can be transmitted once to make both steps of convolutional coding

18   "systematic." Id. at *6. Claims 10, on the other hand, discloses "[a] method for decoding received

19   digital data elements" produced by Claim 1 and comprises four steps performed iteratively: (i) in

20   a first iteration, combining the received digital data elements with a predetermined value to form

21   an intermediate data element; (ii) decoding the intermediate data element to produce a decoded

22   data element; (iii) estimating the source data elements by using the decoded data element to

23   produce an estimated data element; and (iv) for all subsequent iterations, combining the received

24   data elements with one of the estimated data elements estimated from an earlier iteration.

25   These claims will not preempt all applications of an abstract idea. They are limited to one

26   method for "error-correction coding of source digital data elements" and one method for

27   "decoding" those data. '747 Patent 14:46-47, 15:25. Claim 1 does not preempt error-correction

28   coding generally, nor does Claim 10 preempt decoding generally. They both provide unique and

14

1   detailed methods with concrete steps to be applied, and Marvell has provided no evidence that the

2   steps recited are inherent in error-detection coding or decoding. Unlike the invalidated claims in

3   Benson, Flook, and Bilski, the claims do not broadly cover some area of error correction or coding,

4   nor does Marvell argue that it does. They "confine[ ] the claims to a particular, useful

5   application," Mayo Collaborative Servs., 132 S. Ct. at 1300, and the claims "seek only to foreclose

6   from others the use of [the abstract idea] in conjunction with all of the other steps in their claimed

7   process," Diehr, 450 U.S. at 187. These are not like the claim in Benson, which was "so abstract

8   and sweeping" that it could cover usage in a variety of other settings. 409 U.S. at 67. Nor are

9   they as abstract as the three-step alarm system claimed in Flook. 437 U.S. at 585. The steps

10   disclosed are narrow and they confine and tie down the otherwise abstract processes cited—they

11   are more like the process held patentable in Diehr, which was directed to a specific application for

12   curing rubber despite use of an underlying fundamental principle.

13   The claims also provide "inventive concepts" that exceed the prior art, namely, coding in

14   parallel and a novel method of iterative coding. As the Federal Circuit said, "An 'inventive

15   concept' in the § 101 context refers to a genuine human contribution to the claimed subject

16   matter." *CLS Bank Int'l*, 717 F.3d at 1282. The '747 Patent's detailed description explains that

17   the claims disclose methods different from what was known or done before. Primarily, the patent

18   recites "a coding method simultaneously carrying out several coding operations, in parallel, and a

19   method of iterative coding." '747 Patent 7:31-34. The systematic convolutional coding in Claim

20   1 is therefore "contrary to the known convolutional coding methods which take direct account of

21   the series of the preceding source values." '747 Patent 8:51-53. Similarly, '[t]he essential

22   advantage of th[e] iterative [decoding] method is that it enables the making of modular decoders."

23   '747 Patent 10:32-33. Based on the evidence in the record, there is no genuine dispute that the

24   '747 Patent was revolutionary and disclosed a novel process.

25   While error-correction coding and decoding generally may be "disembodied fundamental

26   concept[s]," the steps disclosed in Claims 1 and 10 provide the necessary "substantive claim

27   limitations beyond the mere recitation" of those concepts. *CLS Bank Int'l*, 717 F.3d at 1282.

28   Further, there is no evidence that what is disclosed by those claims are not in fact "a product of

15

human ingenuity." *CLS Bank Int'l*, 717 F.3d at 1282. The steps in these claims do not "consist of well-understood, routine, conventional activity already engaged in by the scientific community; [which], when viewed as a whole, add nothing significant beyond the sum of their parts taken separately." Mayo Collaborative Servs., 132 S. Ct. at 1298. They perform a specific function—that of error correction in coding and decoding. They are not simply claims to an abstract idea with the instruction to "apply it," nor do the claims use "claim drafting strategies that attempt to circumvent the basic exceptions to § 101 using, for example, highly stylized language, hollow field-of-use limitations, or the recitation of token post-solution activity." *CLS Bank Int'l*, 717 F.3d at 1281, 1291 (citation omitted).

Finally, although the MOT test is a non-dispositive factor for patent eligibility, I am not persuaded that Claims 1 and 10 fail the test as a matter of law. CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1371 (Fed. Cir. 2011) ("the Supreme Court has made clear that a patent claim's failure to satisfy the machine-or-transformation test is not dispositive of the § 101 inquiry"). To be sure, the claims seem to fail the "machine" prong of the test because there is nothing in the claims that identifies "a concrete thing, consisting of parts, or of certain devices and combination of devices." SiRF *Tech., Inc. v. Int'l* Trade Comm'n, 601 F.3d 1319, 1332 (Fed. Cir. 2010). But they appear to "effect[ ] meaningful transformation" because they "chang[e] the content" of the source data elements. Cyberfone Sys., LLC v. CNN Interactive Grp., Inc., No. 12-cv-1673, 2014 WL 718153, at *4 (Fed. Cir. Feb. 26, 2014). As the Federal Circuit explained, "Purported transformations or manipulations simply of public or private legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances." In re Bilski, 545 F.3d at 963. In this case, Claim 1 takes digital data elements and turns them into a "distinct series of coded data elements," which Claim 10 in turn decodes. '747 Patent 14:46-47. The digital data elements are "representative" and likely meet the transformation prong of the MOT test articulated in In re Bilski.[6] Regardless of whether the MOT test is met, however, it is

_____

[6] In re Bilski states, "So long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and the claim is limited to a visual depiction that

16

but one part of the analysis for patent eligibility, and I find that the remainder of the analysis is sufficient to support my ultimate conclusion.

Based on the evidence before me, I do not find abstractness in Claims 1 and 10 that "exhibit[s] itself so manifestly as to override the broad statutory categories of eligible subject matter" in the Patent Act. Research Corp. Techs., 627 F.3d at 868. Marvell fails to show as a matter of law that Claims 1 and 10 fall under the "abstract idea" exception to Section 101 eligibility.[7]

8. Marvell's Arguments

Marvell attacks the validity of the patent in several ways. None succeed.

First, citing Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), 687 F.3d 1266, 1279-80 (Fed. Cir. 2012), Marvell argues that Claim 1 "does nothing more than recite mere mathematical computations (addition) and re-ordering of data" and is similar to the ineligible claim in Bancorp, "which recites a method for performing repetitive calculations to establish inputs for an equation to value life insurance policies." Mot. 13. There, the patents at issue "attempt[ed] to patent the use of the abstract idea of managing a stable value protected life insurance policy and then instruct[ed] the use of well-known calculations to help establish some of the inputs into the equation." Bancorp Servs., 687 F.3d at 1278 (internal punctuation omitted).

Bancorp Services is distinguishable. There, the Federal Circuit already assumed that the "managing [of] a stable value protected life insurance policy" was an abstract idea and that limiting the idea to being performed on a computer does not "salvage an otherwise patent-ineligible process." Id. at 1278. There is no such assumption here. The court stated, "Bancorp's

_____

represents specific physical objects or substances, there is no danger that the scope of the claim would wholly pre-empt all uses of the principle." 545 F.3d at 963 (emphasis added). In so stating, because the Federal Circuit was discussing a case involving claims related to transforming data into computer images, I do not understand this principle to mean that all claims meeting the "transformation" prong of the MOT test must involve only visual depictions.

[7] As the Federal Circuit has said, claims "with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act." Research Corp. Techs., 627 F.3d at 869. The technology disclosed in the '747 Patent appears to have had broad commercial application since its filing over two decades ago. This is an additional reason to find that Section 101 covers the methods disclosed in Claims 1 and 10.

17

1   claimed abstract idea impermissibly preempts the mathematical concept of managing a stable

2   value protected life insurance policy." Id. at 1280 (internal punctuation omitted). Analogizing to

3   the patent for hedging risk in the energy market in Bilski, the Federal Circuit observed that "the

4   fact that the required calculations could be performed more efficiently via a computer does not

5   materially alter the patent eligibility of the claimed subject matter." Id. at 1278. Similarly, the

6   court rejected Bancorp's argument that the claims were not abstract because their use was limited

7   to the life insurance market since "Flook established that limiting an abstract idea to one field of

8   use . . . did not make the concept patentable." Bilski, 130 S. Ct. at 3231. But as explained above,

9   the '747 Patent does not preempt the fields of error-correction coding and decoding. While the

10   fields themselves may be abstract, Claims 1 and 10 prescribe particular methods of applying the

11   ideas. As the Supreme Court noted in Diehr, "an application of a law of nature or mathematical

12   formula to a known structure or process may well be deserving of patent protection." 450 U.S. at

13   187. That principle applies to the claims at issue here.[8]

14   Second, Marvell argues that this is a case like CyberSource Corp. v. Retail Decisions, Inc.,

15   654 F.3d 1366, 1370-73 (Fed. Cir. 2011), in which "a method for verifying the validity of a credit

16   card transaction over the Internet" was found not patent-eligible because the "method steps can be

17   performed in the human mind, or by a human using a pen and paper," because here, "the asserted

18   claims recite algorithmic steps that can be performed by a human using pen and paper." Mot. 13

19   (citing Min Decl. ¶¶ 29-39, 42-46 and Compression Tech. Solutions LLC v. EMC Corp., No. 12-

20   cv-1746-RMW, 2013 WL 2368039, at *5-6 (N.D. Cal. May 29, 2013) ("broad patent claims can

21   be completed entirely in the human mind or with a little help from pencil and paper")).

22   In Cybersource, the Federal Circuit addressed Claim 3 of the patent at issue: "A method

23   for verifying the validity of a credit card transaction over the Internet comprising the steps of: a)

24   obtaining information about other transactions that have utilized an Internet address that is

25   _____

26   [8] Marvell also cites to Cyberfone Systems, LLC v. CNN Interactive Group, Inc., No. 2012-1673,
     2014 WL 718153, at *2 (Fed. Cir. Feb. 26, 2014), which held a method of "collecting information
27   in classified form, then separating and transmitting that information according to its classification,
     is an abstract idea that is not patent-eligible." Marvell argues that the '747 Patent also "recite[s]
28   an abstract idea involving the mere manipulation of information" and should be patent ineligible.
     Mot. 14. That case is distinguishable for the same reason Bancorp Services is distinguishable.

18

1 identified with the [ ] credit card transaction; b) constructing a map of credit card numbers based

2 upon the other transactions and; c) utilizing the map of credit card numbers to determine if the

3 credit card transaction is valid." 654 F.3d at 1370. The court stated, "It is clear that unpatentable

4 mental processes are the subject matter of claim 3. All of claim 3's method steps can be

5 performed in the human mind, or by a human using a pen and paper." Id. at 1372. It explained

6 that "[m]ethods which can be performed entirely in the human mind are unpatentable not because

7 there is anything wrong with claiming mental method steps as part of a process containing non-

8 mental steps, but rather because computational methods which can be performed entirely in the

9 human mind are the types of methods that embody the 'basic tools of scientific and technological

10 work' that are free to all men and reserved exclusively to none." Id. at 1373 (quoting Benson, 409

11 U.S. at 67).

12 Marvell's citation to Cybersource does not help it. Marvell has not shown by clear and

13 convincing evidence that the steps recited in Claims 1 and 10 "can be performed in the human

14 mind, or by a human using a pen and paper." Its expert asserts that the steps in Claim 1 "could be

15 performed mentally" and "can be done by a human." Min. Decl. ¶¶ 32, 37. Similarly, he contends

16 that Claim 10 "might be performed mentally (or manually by hand)." Min. Decl. ¶ 47. But

17 Marvell's expert is directly controverted by France Telecom's expert, who urges that Claims 1 and

18 10 "could not be performed by a human." Mitzenmacher Decl. ¶¶ 56, 59. While France

19 Telecom's expert allowed in a deposition that systematic convolutional coding could be done by

20 hand, he clarifies in his declaration that such coding could only be "emulate[d]." Mitzenmacher

21 Decl. ¶ 56. More importantly, he has not conceded that the remainder of Claims 1 and 10 can

22 either be performed mentally or by a human. This is a material issue of fact sufficient to defeat

23 summary judgment. See TQP Dev., LLC v. Intuit Inc., No. 12-cv-180, 2014 WL 651935, at *5

24 (E.D. Tex. Feb. 19, 2014) (Bryson, J.) ("While the defendants assert that the encryption and

25 decryption process can be performed in the human mind or with pencil and paper, TQP has

26 offered evidence to the contrary, in the form of an expert's declaration . . . . That factual dispute by

27 itself is enough to foreclose the entry of summary judgment in the defendants' favor on the present

28 record.").

19

1   Third, Marvell argues that Claims 1 and 10 do not meet the transformation prong of the

2   MOT test because the "mere manipulation of data" is insufficient to do so. Analogizing to

3   Bancorp Services, 687 F.3d at 1278, where the Federal Circuit affirmed the district court's

4   conclusion that the claims do not effect a transformation since they "do not transform the raw data

5   into anything other than more data and are not representations of any physically existing objects,"

6   Marvell asserts that the '747 Patent's claims "do not effect a transformation but merely calculate

7   coded data elements using source data elements." Mot. 16. Claim 1 merely recites "implementing

8   at least two independent and parallel steps of systematic convolutional coding" and "temporally

9   interleaving" data elements, and Claim 10 simply recites an iterative process of "combining,"

10   "decoding," and "estimating" data elements. Thus, Marvell argues, the asserted claims do not

11   meet the transformation prong. Mot. 16-17.

12   Again, Bancorp Services is distinguishable. That case involved "systems and methods for

13   administering and tracking the value of life insurance policies in separate accounts." Bancorp

14   Servs., 687 F.3d at 1269. Analogizing to the claims in Bilski for hedging risk in the energy

15   market, the Federal Circuit held that "the claims do not effect a transformation" and the MOT test

16   was not satisfied. Id. at 1278. But the patents in both Bancorp Services and Bilski only "instruct"

17   the use of "well-known" equations and techniques for making "repetitive calculations." Id. Those

18   cases involved claims that "simply state [a] law of nature while adding the words 'apply it.'"

19   Mayo Collaborative Servs., 132 S. Ct. at 1294 (2012). To characterize the methods disclosed in

20   Claims 1 and 10 as "calculations" based on well-known formulae misunderstands the fact that the

21   claims in the '747 Patent are "inventive application[s] of [ ] principle[s that] may be patented."

22   Flook, 437 U.S. at 594. The claims explain how to perform a particular method of error correction

23   and decoding—they do not simply identify an abstract idea and instruct the reader to apply the

24   idea.

25   The decision of Judge Bryson of the Federal Circuit in TQP Development, LLC v. Intuit

26   Inc., No. 12-cv-180, 2014 WL 651935 (E.D. Tex. Feb. 19, 2014), is especially instructive. That

27   case involved a patent for making electronic computer communications more effective and secure

28   through the use of encryption. Id. at *7. Applying the "transformation" prong of the MOT test,

1   Judge Bryson noted, "Typically, transforming data from one form to another does not qualify as

2   the kind of transformation that the Supreme Court in Bilski regarded as an important indicator of

3   patent eligibility." Id. at *5 (citing CyberSource, 654 F.3d at 1375 ("[T]he mere manipulation or

4   reorganization of data . . . does not satisfy the transformation prong.")). "In the case of an

5   invention in the field of encryption, however, the entire object of the invention is to transform data

6   from one form into another . . . . In that setting, it does not make sense to say that the

7   transformation of data from one form to another cannot qualify as a patent-eligible invention,

8   because that is what the field of cryptology is all about." Id. The judge further explains that while

9   "[t]here are some seeming similarities between this case and several other cases in which the

10   Supreme Court or the Federal Circuit have found claims patent ineligible under section 101," such

11   as Bilski and Bancorp Services, the similarities are "superficial" because the claims in those cases

12   "would have broadly preempted commonplace practices in business [ ] and other fields." Id. at *6.

13   The patent at issue "involves a method for changing data in a way that will affect the

14   communication system itself, by making it more secure. Thus, although the invention in this case

15   does not result in the physical transformation of matter of the sort involved, for example, in

16   Diamond v. Diehr, 450 U.S. 175 (1981) (method for curing rubber), it involves a specific system

17   for modifying data that has equally concrete and valuable effects in the field of electronic

18   communications." Id. at 7.

19   Here, the purpose of the '747 Patent is to disclose a method for more accurate and efficient

20   data transmission. This case is more like TQP Development than the other cases cited by Marvell.

21   To invalidate the Claims 1 and 10 based on an overly narrow reading of those cases would go

22   against the CLS Bank plurality's observation that Supreme Court precedents "urge a flexible,

23   claim-by-claim approach to subject-matter eligibility that avoids rigid line drawing" as opposed to

24   "overly formalistic approaches to subject-matter eligibility that invite manipulation by patent

25   applicants." CLS Bank, 717 F.3d at 1281. As the panel stated, "Bright-line rules may be simple to

26   apply, but [ ] are often impractical and counterproductive when applied to § 101" and "outdated in

27   the face of continual advances in technology." CLS Bank, 717 F.3d at 1281. Claims 1 and 10 of

28   the '747 Patent meet the eligibility standard under the patent laws.

II. EXTRATERRITORIAL SALES

Marvell argues that France Telecom is not entitled to damages for chips sold by MAPL, which is not a party in this action, because MAPL is a separate legal entity and because there is no liability under United States patent law for infringement that occurs abroad.[9] Mot. 1, 17. Conversely, France Telecom argues that the proper measure of damages is a hypothetical negotiation that asks what royalty the parties would have agreed to involving MAPL's foreign sales by assessing factors listed in Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

A. Applicable Law

35 U.S.C. § 271(a) states, "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." "It is axiomatic that U.S. patent law does not operate extraterritorially to prohibit infringement abroad." Power Integrations, Inc. *v. Fairchild Semiconductor Int'l*, Inc., 711 F.3d 1348, 1371 (Fed. Cir. 2013). The patent laws "do not [ ] provide compensation for a defendant's foreign exploitation of a patented invention, which is not infringement at all." Id. A party "has no claim to any compensation for the profit or advantage [an alleged infringing] party may derive from [the infringement]." Brown v. Duchesne, 60 U.S. 183, 196 (1856). "Patent infringement damages, therefore, must compensate only for the consequences of domestic activities." Oracle Am., Inc. v. Google Inc., 798 F. Supp. 2d 1111, 1118 (N.D. Cal. 2011) (Alsup, J.).

"To infringe a method claim, a person must have practiced all steps of the claimed method." Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1317 (Fed. Cir. 2009). "It is the general rule under United States patent law that no infringement occurs when a patented product is made and sold in another country." Microsoft Corp. v. AT & T Corp., 550 U.S. 437, 441 (2007). "The presumption that United States law governs domestically but does not rule the world applies

---

[9] Marvell also argues that "it is likely the Court does not have personal jurisdiction over MAPL and it would be prejudicial for the Court to exercise jurisdiction over MAPL and its activities here, especially when France Telecom has been on notice of MAPL's sales since at least July 19, 2013." Mot. 17 n.7.

1   with particular force in patent law." Id. at 445-46. "Mere knowledge that a product sold overseas

2   will ultimately be imported into the United States is insufficient to establish liability under section

3   271(a)." MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp., 420 F.3d 1369, 1377

4   (Fed. Cir. 2005); MediaTek Inc. v. Freescale Semiconductor, Inc., No. 11-cv-5341-YGR, 2014

5   WL 580836 (N.D. Cal. Feb. 13, 2014).

6   "Upon finding for the claimant the court shall award the claimant damages adequate to

7   compensate for the infringement, but in no event less than a reasonable royalty for the use made of

8   the invention by the infringer, together with interest and costs as fixed by the court." 35 U.S.C.

9   § 284. "Litigants routinely adopt several approaches for calculating a reasonable royalty. The

10   first, the analytical method, focuses on the infringer's projections of profit for the infringing

11   product." Lucent Techs., 580 F.3d at 1324. "The second, more common approach, called the

12   hypothetical negotiation or the 'willing licensor-willing licensee' approach, attempts to ascertain

13   the royalty upon which the parties would have agreed had they successfully negotiated an

14   agreement just before infringement began." Id. (citing Georgia-Pacific, 318 F. Supp. at 1120).

15   "The hypothetical negotiation tries, as best as possible, to recreate the ex ante licensing negotiation

16   scenario and to describe the resulting agreement. In other words, if infringement had not occurred,

17   willing parties would have executed a license agreement specifying a certain royalty payment

18   scheme. The hypothetical negotiation also assumes that the asserted patent claims are valid and

19   infringed." Id.

20   **B. Application Of Law**

21   Marvell is entitled to judgment as a matter of law that France Telecom is not entitled to

22   damages based on foreign sales by MAPL. Marvell is not liable for the actions of a third party,

23   nor is it liable for infringement that occurred abroad.

24   **1. Marvell is not liable for the actions of a third party.**

25   As an initial matter, the parties do not dispute that MAPL is a separate legal entity from

26   Marvell. See Matukaitis Decl. ¶¶ 3, 10-11. Based on the Complaint and the evidence in the

27   record, there is no basis for holding Marvell liable for any infringing activities by MAPL.

28   France Telecom responds that there is an issue of fact because "[t]here was no legal

23

1 impediment to the parties['] voluntarily agreeing in a hypothetical negotiation to make France

2 Telecom's reasonable royalty independent of the legal entities or instrumentalities through which

3 Marvell effected sales." Opp'n (Dkt. No. 142-3) 20-21. ███████████████████████████████████

4 ██

5 ██

6 ██

7 ██

8 ██

9 ████████.[10]

10   France Telecom's argument is weak and does not create a genuine issue of material fact.

11 See Celotex Corp., 477 U.S. at 324. That France Telecom █████████████████████████████████

12 ████████████████████████ is too attenuated a basis for letting the jury decide that Marvell would

13 have agreed to subject itself to damages caused by a separate legal entity.[11] France Telecom

14 cannot create an issue of fact simply by speculating without any factual support that Marvell

15 would undertake such an obligation.

16   **2. Marvell is not liable for infringement that occurred abroad.**

17   Even if Marvell can be responsible for MAPL's actions, Marvell is not liable for any

18 infringement that occurs outside the United States. Power Integrations, Inc. v. Fairchild

19 *Semiconductor Int'*l, Inc., is directly on point. There, the Federal Circuit made it unequivocally

20 clear that the patent laws do not prohibit infringement abroad and therefore do not provide

21 "damages adequate to compensate" for such infringement. Power Integrations, 711 F.3d at 1371

22 (Fed. Cir. 2013). In that case, the court rejected the plaintiff's argument that, "having established

23 one or more acts of direct infringement in the United States, [the plaintiff] may recover damages

24

25 [10] France Telecom exaggerates this testimony: all that the deponent stated was that Marvell would reroute purchase orders from one particular customer to MAPL, not that it broadly "facilitated the sale of Marvell Chipsets even for its affiliates."

26 [11] France Telecom also does not assert that Marvell should be liable under an alter-ego theory, so there is no basis for holding Marvell liable for any infringement by MAPL. Cf. Tegal Corp. v.

27 Tokyo Electron Co., Ltd., 248 F.3d 1376, 1380 (Fed. Cir. 2001) ("In the absence of evidence showing that the parent company either was an alter ego of the subsidiary or controlled the

28 conduct of the subsidiary, we refuse[ ] to find direct infringement.").

24

1 for [the defendant]'s worldwide sales of the patented invention because those foreign sales were

2 the direct, foreseeable result of [the defendant]'s domestic infringement." Id. In particular, it

3 stated that the defendant had "not cited any case law that supports an award of damages for sales

4 consummated in foreign markets, regardless of any connection to infringing activity in the United

5 States." Id. The law also does not provide damages for infringement that originates domestically

6 because "the entirely extraterritorial production, use, or sale of an invention patented in the United

7 States is an independent, intervening act that, under almost all circumstances, cuts off the chain of

8 causation initiated by an act of domestic infringement." Id. at 1371-72.

9 The Supreme Court is equally clear that the patent laws do not have extraterritorial effect.

10 As it said in Microsoft Corp. v. AT&T Corp., "The traditional understanding that our patent law

11 operates only domestically and does not extend to foreign activities is embedded in the Patent Act

12 itself . . . ." 550 U.S. at 455 (citation and internal punctuation omitted). "In short, foreign law

13 alone, not United States law, currently governs the manufacture and sale of components of

14 patented inventions in foreign countries." Id. at 456. If France Telecom "desires to prevent

15 copying in foreign countries, its remedy today lies in obtaining and enforcing foreign patents." Id.

16 There is no dispute that MAPL produced, sold, and shipped the accused chips from outside

17 the United States. Matukaitis Decl. ¶¶ 12-13, 16. Under Power Integrations, because all these

18 activities occurred abroad, France Telecom is not entitled to any damages based on the accused

19 chips. France Telecom argues, however, that (i) the '747 Patent was infringed each time an

20 accused chip was used in the United States (even if it was originally sold abroad), (ii) "Marvell"

21 advertised its devices as suitable for use worldwide, and (iii) "Marvell" ▮▮▮▮▮▮▮▮▮▮▮▮

22 ▮▮▮▮▮▮▮▮ in the United States.[12] Opp'n 18. But none of that would make Marvell liable as

23 Power Integrations states that the foreign production or sale of an otherwise infringing product

24

25 ---
[12] Marvell claims that "the majority of the development activities for the accused chips (▮▮▮▮

26 ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮, not by Marvell in the United
States. Mot. 19 (citing Rothmann Decl. ¶¶ 5-6). "▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

27 ▮▮
▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ Mot. 19-21 & 20 n.9 (citing Rycroft

28 Decl. Ex. 7, Rothmann Dep. Tr. 101:22-102:25, 105:21-107:4, 108:7-13, 110:17-111:4, 115:22-
24, 118:11-20, 122:5-15, 123:9-125:17; Rothmann Decl. ¶¶ 5-10).

25

1 renders it not actionable. 711 F.3d at 1371-72. Accordingly, France Telecom is not entitled to

2 any damages or royalties based on infringement that occurred abroad.

3   France Telecom argues that Power Integrations is inapposite because the court there

4 considered lost profits as opposed to reasonable royalties calculated by assessing a hypothetical

5 negotiation. Opp'n 22. "Instead, France Telecom contends that, in a hypothetical

6 negotiation . . . the parties would have agreed, under [ ] Georgia Pacific," to a royalty. Opp'n 22.

7 That argument is misplaced. Power Integrations's occasional reference to "lost profits" is

8 immaterial to the underlying principle, which was that a plaintiff is not entitled to damages for

9 patent infringement that occurred abroad. Indeed, the plaintiff in Power Integrations sought a

10 "lump sum reasonable royalty," but was denied all recovery based on the foreign infringement.

11 711 F.3d at 1369-71. More importantly, France Telecom cites no authority for the proposition that

12 a hypothetical negotiation can or should include foreign sales that would not otherwise be

13 actionable.[13]

14   As one court observed, "[W]hile we recognize that the determination of a reasonable

15 royalty envisions a hypothetical license negotiation between the infringer and the patent owner,

16 using factors delineated in Georgia–Pacific Corp. v. United States Plywood Corp., 318 F.Supp.

17 1116, 1119–20 (S.D.N.Y. 1970), none of those factors support a conclusion that [the defendant]

18 would pay for the right to engage in foreign sales it already has a legal right to make.

19 Accordingly, we conclude that [the defendant's] foreign sales may not be taken into account in

20 any determination of a reasonable royalty." Enpat, Inc. v. Microsoft Corp., 6 F. Supp. 2d 537,

21 539-40 (E.D. Va. 1998). Indeed, Power Integrations made reference to a "hypothetical royalty

22 negotiation" while discussing another issue related to damages, but neither the court nor the

23 parties raised the possibility of a royalty based on foreign sales.[14] 711 F.3d at 1379.

24

25 [13] At the motion hearing, I asked France Telecom's counsel if there was any case that applied the
    Georgia-Pacific framework to infringement outside the United States. He could not identify one
26 besides Carnegie Mellon Univ. v. Marvell Tech. Group, Ltd., No. 09-cv-290, 2013 WL 5332108
    (W.D. Pa. Sept. 23, 2013), which is distinguishable since the plaintiff in that case did not seek
27 damages for infringing conduct that occurred beyond the United States.
    [14] Marvell argues that any "hypothetical negotiation" must take place between France Telecom
28 and the alleged infringer—here, Marvell—and not non-parties such as MAPL. Reply 13 (citing
    Wordtech Sys., Inc. v. Integrated Networks Solutions, Inc., 609 F.3d 1308, 1319 (Fed. Cir. 2010).

France Telecom argues that Microsoft is irrelevant because it deals only with the narrow question of whether an exported component was "combined" within the meaning of 35 U.S.C. § 271(f) such that configuration of the product outside the United States was actionable. Opp'n 21. While France Telecom is partially correct that the Supreme Court was "addressing" the question France Telecom identified, it is wrong that Microsoft is irrelevant or that it "dealt only" with a "narrow question." Microsoft addressed whether the alleged infringer "without authority supplie[d] or cause[d] to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States." 35 U.S.C. § 271(f). Though the case did not address damages or royalties, the Supreme Court spoke broadly about the applicability (or lack thereof) of United States patent law extraterritorially and stated that "[a]ny doubt that [the defendant's] conduct falls outside § 271(f)'s compass would be resolved by the presumption against extraterritoriality." That same presumption applies in this case.

Two other cases involving Marvell have addressed whether Marvell is liable for extraterritorial sales. In Lake Cherokee Hard Drive Technologies, L.L.C. v. Marvell Semiconductor, Inc., 964 F. Supp. 2d 653, 657 (E.D. Tex. 2013), the court granted Marvell's "motion for summary judgment of no liability on sales transacted by MAPL . . . with respect to products shipped [from outside the United States] to customers located outside the United States and which never reach the domestic United States market." Lake Cherokee did not address Power Integrations and relied primarily on Microsoft and Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296 (Fed. Cir. 2010), as authority. Transocean persuaded the Lake Cherokee court to conclude, despite certain factual differences between that case and the one before it, that an infringing product that was both manufactured and delivered outside the United States was not actionable under the 35 U.S.C. § 271(a). Lake Cherokee, 964 F. Supp. 2d at 657-58. However, the court denied summary judgment "with respect to accused

("A reasonable royalty can be calculated from . . . a hypothetical negotiation between the patentee and infringer.")).

1 products that ultimately reach the United States market and compete domestically with the rights

2 of the patent holder." Id. at 658. While I agree with the first holding, the latter holding is not

3 persuasive given the Federal Circuit's instruction in Power Integrations that "the entirely

4 extraterritorial production, use, or sale of an invention patented in the United States is an

5 independent, intervening act that, under almost all circumstances, cuts off the chain of causation

6 initiated by an act of domestic infringement." 711 F.3d at 1371-72.

7 In the other case, Carnegie Mellon Univ. v. Marvell Tech. Group, Ltd., No. 09-cv-290,

8 2013 WL 5332108 (W.D. Pa. Sept. 23, 2013), the court found Power Integrations and Lake

9 Cherokee inapplicable in a post-trial order.[15] In an earlier summary judgment order issued before

10 Power Integrations was decided, the court allowed damages based on "extraterritorial conduct" to

11 be included in the final calculation. Id. at *46. The court later concluded in the post-trial order

12 that Power Integrations was distinguishable, observing that the "fact pattern is quite distinct from

13 the facts at hand" because "unlike the situation in Power Integrations, CMU [Carnegie Mellon]

14 d[id] not seek 'damages for injury caused by infringing activity that occurred outside the territory

15 of the United States.'" Id. at *47 (quoting Power Integrations, 711 F.3d at 1371) (Carnegie

16 Mellon's emphasis). The court emphasized that "CMU has always sought damages for domestic

17 infringement resulting from Marvell's use of the patented methods during research, development,

18 chip design, qualification, use of engineering samples, continuous evaluation and indirect

19 infringement by end users in the United States" and "[t]here was ample evidence presented at trial

20 to establish that these infringing activities occur[red] in the United States." Id. at *48. At trial,

21 Marvell had made a strategic decision to present almost no evidence to the jury of any activity that

22 occurred outside the United States.[16] Id. at *52. The record did not support the exclusion of any

23 damages based on extraterritoriality. For that reason, the court also concluded that Lake Cherokee

24

25 [15] Marvell notes that it will be appealing the ruling. Mot. 21 n.12.

26 [16] The court stated, "Not a single purchase order, nor delivery receipt, nor any revenue data was introduced by Marvell. No Marvell witness testified that activities such as sales, orders,

27 deliveries, or accounting occurred overseas. Marvell's strategy was 'all or nothing' in this case. By choosing to allow CMU to present all of the evidence regarding Marvell and its business,

28 Marvell was not able to control the message given to the jury, nor was it able to establish convincing contrasting arguments." Carnegie Mellon, 2013 WL 5332108, at *52.

1 was inapposite because the court there "was presented with undisputed facts regarding Marvell's

2 foreign activities." Id.

3 Neither Carnegie Mellon nor Lake Cherokee suggests that France Telecom should be

4 entitled to damages based on foreign sales. While Lake Cherokee did not address Power

5 Integrations, it supports the principle that extraterritorial infringement is not actionable. With

6 regard to Carnegie Mellon, Marvell seems to have learned its lesson because it has now put

7 forward undisputed evidence that the manufacturing, sale, and delivery of the accused chips all

8 occurred outside the United States. France Telecom attempts to distinguish Lake Cherokee by

9 asserting that the infringement claims in this case are based upon the use of the methods by

10 products that may have entered the United States. Opp'n 22 n.1. That argument is foreclosed by

11 Power Integrations's instruction that "the entirely extraterritorial production, use, or sale of an

12 invention patented in the United States is an independent, intervening act that, under almost all

13 circumstances, cuts off the chain of causation initiated by an act of domestic infringement." 711

14 F.3d at 1371-72. It is also foreclosed by the Federal Circuit's suggestion that it is unaware of any

15 "any case law that supports an award of damages for sales consummated in foreign markets,

16 regardless of any connection to infringing activity in the United States." Id. at 1371. Since there

17 is no genuine issue of material fact that all sales of the accused chips happened abroad, France

18 Telecom is not entitled to damages because the chips may ultimately end up and be used in the

19 United States.

20   **CONCLUSION**

21 Based on the parties' briefing and argument, Marvell's motion for summary judgment to

22 invalidate Claims 1 and 10 of the '747 Patent is DENIED and its motion for partial summary

23 judgment to preclude damages based on MAPL's sale of accused chips abroad is GRANTED.

24   **IT IS SO ORDERED.**

25 Dated: April 14, 2014

26   _____
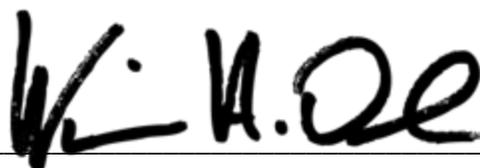
27   WILLIAM H. ORRICK
                                                     United States District Judge

28