

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JP MORGAN CHASE & CO., and
JP MORGAN CHASE BANK, N.A.,
Petitioner,

v.

MAXIM INTEGRATED PRODUCTS, INC.,
Patent Owner.

Case CBM2014-00179
Patent 5,940,510

Before TREVOR M. JEFFERSON, MITCHELL G. WEATHERLY, and
KERRY BEGLEY, *Administrative Patent Judges*.

BEGLEY, *Administrative Patent Judge*.

DECISION
Institution of Covered Business Method Patent Review
37 C.F.R. § 42.208

JP Morgan Chase & Co. and JP Morgan Chase Bank, N.A. (collectively, “Petitioner”) filed a Petition requesting covered business method patent review (“CBM review”) of claims 1–3, 5, and 6 of U.S. Patent No. 5,904,510 (Ex. 1001, “the ’510 patent”). Paper 1 (“Pet.”). Maxim Integrated Products, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

Pursuant to 35 U.S.C. § 324(a), CBM review may not be instituted unless “the information presented in the petition . . . , if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” For the reasons that follow, we determine that the Petition, taking into account the Preliminary Response, demonstrates that it is more likely than not that the challenged claims of the ’510 patent are unpatentable. We institute review of the challenged claims on certain asserted grounds of unpatentability.

I. BACKGROUND

A. RELATED PROCEEDINGS

Patent Owner has asserted the ’510 patent against Petitioner in the U.S. District Court for the Western District of Pennsylvania, *Maxim Integrated Products, Inc. v. JP Morgan Chase & Co.*, No. 2:12-cv-01641-JFC (“the District Court Case”). Pet. 4–6; Paper 6, 2. This case was consolidated, with many other cases involving the ’510 patent filed in various district courts, into a multidistrict litigation proceeding in the Western District of Pennsylvania, *In re: Maxim Integrated Products, Inc.*, MDL No. 2354, Misc. No. 12-244-JFC (W.D. Pa.) (“the MDL Proceeding”). Pet. 4–6; Paper 6, 2–4.

In addition, the '510 patent is the subject of a pending *ex parte* reexamination proceeding, Control No. 90/013,063 (“the Reexamination Proceeding”). Pet. 6–7; Paper 6, 1. The '510 patent also was previously the subject of a petition for CBM review filed by Petitioner and PNC Bank, N.A. (“PNC”) in CBM2014-00038, in which review was not instituted, as further detailed in Section II.A.1 below.

B. THE '510 PATENT

The '510 patent is directed to a “system, apparatus, and method for communicating valuable data,” more specifically, a “cash equivalent,” to and from a “portable module.” Ex. 1001, [57], 1:59–61. A consumer can carry the portable module, fill it with a cash equivalent at an “add-money station,” and spend the stored cash equivalent “when buying products and services in the market place.” *Id.* at [57], 1:61–2:2. For example, a consumer can “take cash out of an ATM” and “put the cash value into the portable module,” and can use monetary value on the portable module to “pay for a train fare.” *Id.* at 7:13–35, 8:30–37.

In a preferred embodiment, portable module 102 communicates to microprocessor based device 104, which is connected to secure microprocessor based module 108. *Id.* at 1:64–66, 2:32–34, 2:59–61. Portable module 102 is a “rugged read/write data carrier,” comprising memory 202, memory controller 204, counter 206 “for keeping track of the number of transactions the module has performed,” timer 208 “to time stamp transactions performed by the module,” unique identification number 210, and input/output control circuit 212. *Id.* at 3:39–4:24. Microprocessor based device 104, in turn, “can be any of an unlimited number of devices,”

for example, “a personal computer, an add-a-fare machine at a train or bus station (similar to those in today’s District of Columbia metro stations), a turn style, a toll booth, a bank’s terminal, . . . a washing machine at a Laundromat, . . . or any device that controls access, or meters a monetary equivalent.” *Id.* at 2:36–45. Finally, secure microprocessor based module 108 comprises “microprocessor 12, a real time clock 14, control circuitry 16, a math coprocessor 18, memory circuitry 20, input/output circuitry 26, and an energy circuit 34.” *Id.* at 4:24–32. In particular, math coprocessor 18 “handle[s] the complex mathematics of [Rivest-Shamir-Adleman (“RSA”)] encryption and decryption or other types of math intensive encryption or decryption techniques.” *Id.* at 4:60–65.

C. ILLUSTRATIVE CLAIM

Claim 1, the sole independent claim of the ’510 patent, is illustrative of the claimed subject matter:

1. A system for communicating data securely, comprising:
 - a first portable module comprising:
 - a nonvolatile memory for storing a first data;
 - a first real time clock circuit for time stamping data transactions;
 - a counter for counting a transaction count;
 - an input/output circuit;
 - a substantially unique electronically readable identification number readable by said input/output circuit; and
 - a memory control circuit in electrical communication with said nonvolatile memory, said real time clock, said counter, and said input/output circuit;
 - a portable module reader that can be placed in communication with said first portable module, said portable module reader can be connected to a plurality of other devices;

a secure microcontroller based module in electronic communication with said portable module reader, said secure microcontroller comprising:
 a microcontroller core;
 a math coprocessor, in communication with said microcontroller core, for processing encryption calculations;
 an energy circuit for storing energy;
 a memory circuit connected to said microcontroller core;
 a memory circuit in communication with said microcontroller core; and
 a second real time clock circuit in communication with said microcontroller,
 said combination of said portable module reader and said secure microcontroller performing secure data transfers with said first portable module.

Ex. 1001, 24:1–36 (line breaks added).

D. ASSERTED GROUNDS

Petitioner challenges the '510 patent claims on the following grounds.

Challenged Claims	Basis	Reference[s]
1–3	§ 103	Cremin and Hawkes
5, 6	§ 103	Cremin, Hawkes, and Rivest
1–3, 5, 6	§ 101	

These asserted grounds rely upon the following § 102(b) prior art references (Pet. 23–25):

International Patent Application Publication No. WO 83/03018
 (published Sept. 1, 1983) (Ex. 1003, “Cremin”).

INTEGRATED CIRCUIT CARDS, TAGS AND TOKENS ix–xv, 1–38, 81–91,
 136–164 (P.L. Hawkes et al., eds. 1990) (Ex. 1004, “Hawkes”).

R. L. Rivest et al., *A Method for Obtaining Digital Signatures and Public-Key Cryptosystems*, 21 COMM. OF THE ACM 2, 120
 (1978) (Ex. 1005, “Rivest”).

II. ANALYSIS

A. REAL PARTY IN INTEREST — ALLEGED § 325(A)(1) BAR

Petitioner and Patent Owner dispute whether PNC—who previously filed an action challenging the validity of claims of the '510 patent—is a real party in interest in this proceeding, such that institution of review is barred under 35 U.S.C. § 325(a)(1). Pet. 1–3; Prelim. Resp. 1–27.

1. *Relevant Facts*

On January 25, 2012, PNC filed *PNC Financial Services Group, Inc. v. Maxim Integrated Products, Inc.*, No. 2:12-cv-00089-JFC (W.D. Pa.) (“the PNC Case”), asserting that claims of the '510 patent were invalid. CBM2014-00038, slip op. at 2–3 (PTAB June 2, 2014) (Paper 19) (“CBM2014-00038 Dec. Inst.”). This case and the District Court Case in which Patent Owner asserted the '510 patent against Petitioner were consolidated into the MDL Proceeding. *See* Pet. 4; Paper 6, 2.

On November 22, 2013, Petitioner and PNC jointly filed a petition for review of the '510 patent in CBM2014-00038 (“CBM2014-00038 Petition”). CBM2014-00038, Paper 3. On April 1, 2014, Petitioner and PNC filed a motion for adverse judgment against PNC. CBM2014-00038, Paper 11.

On May 21, 2014, PNC and Patent Owner stipulated to dismiss with prejudice all claims and counterclaims in the PNC Case. Ex. 1009. On the same day, PNC withdrew from the joint defense and common interest agreement in the MDL Proceeding, of which Petitioner is a signatory. Ex. 1012; *see* Pet. 2–3.

On June 3, 2014, the Board denied the CBM2014-00038 Petition and dismissed as moot the motion for adverse judgment. CBM2014-00038 Dec.

Inst. 3–4. The Board concluded that § 325(a)(1) precluded institution of CBM review, because PNC, a petitioner and real party in interest, had filed a civil action challenging claims of the '510 patent. *Id.* at 3. The Board, however, “express[ed] no opinion regarding the likelihood that any party other than PNC would prevail in establishing that any of the challenged claims are unpatentable for the reasons set forth in the Petition.” *Id.*

Petitioner retained new counsel to prepare the current Petition challenging the '510 patent, which it filed on August 21, 2014. Pet. 2.

2. Discussion

Petitioner argues that PNC is not a real party in interest in this proceeding, because “PNC has had no participation or control in the filing of this Petition” and “has no interest in the outcome of this proceeding.” *Id.* at 2–3. Petitioner emphasizes that PNC settled the PNC Case in May 2014 and therefore, PNC and Petitioner have not been co-signatories to any joint defense agreement since that time; Petitioner and PNC are “entirely separate and unrelated corporate entities with no common ownership . . . and no common control”; and counsel that prepared this Petition differs from the counsel that prepared the CBM2014-00038 Petition. *Id.*

Patent Owner, however, contends that PNC is a real party in interest because, under the clear language of § 325(a)(1) and the Board’s decision denying institution in CBM2014-00038, PNC’s status as a real party in interest cannot be altered by ceasing further participation in challenging the '510 patent or settling its dispute with Patent Owner. Prelim. Resp. 2–3, 8–9, 13–15. In addition, Patent Owner argues that even if new facts could alter PNC’s status as a real party in interest, PNC remains a real party in interest

in this proceeding under the facts of this case. *Id.* at 3, 9, 15–27.

Specifically, according to Patent Owner, the Petition is substantially similar to the CBM2014-00038 Petition that challenged the same patent, and is supported by a declaration from the same declarant. *Id.* at 3–4, 7–9, 15–22. Patent Owner, thus, argues that PNC’s prior “funding, control, and other contributions” to the CBM2014-00038 Petition remain in this Petition. *Id.* Patent Owner also asserts that Petitioner and PNC jointly planned and announced to the Board in CBM2014-00038 that Petitioner would re-file a petition, and suggests this shows PNC has an ongoing understanding with Petitioner and a continued interest in the ’510 patent. *Id.* at 3, 9, 12, 22–25.

As an initial matter, we are not persuaded by Patent Owner’s argument that, regardless of *any* factual changes since the preparation and filing of the CBM2014-00038 Petition, PNC must be a real party in interest in this proceeding, under the language of § 325(a)(1) and the Board’s prior decision in CBM2014-00038. As the Office Patent Trial Practice Guide explains, “[w]hether a party who is not a named participant in a given proceeding nonetheless constitutes a ‘real [party in interest]’ . . . to that proceeding is a highly fact-dependent question,” which must be addressed on a “case-by-case basis.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012) (“Trial Practice Guide”) (citing *Taylor v. Sturgell*, 553 U.S. 880, 893–95 & n.6 (2008)). Here, the facts relevant to whether PNC is a real party in interest, including PNC’s participation in and interest in this proceeding, are significantly different than the facts presented in CBM2014-00038. Therefore, we address the issue of whether PNC is a real party in interest under the facts of this proceeding.

In general terms, a real party in interest is a “party that desires review of the patent” or “at whose behest the petition has been filed.” *Id.* (explaining these considerations apply to “IPR and PGR proceedings” and “similar considerations” apply to CBM review). Courts, which traditionally have invoked the term real party in interest to describe a relationship sufficient to justify applying conventional principles of estoppel and preclusion to non-parties, have identified multiple relevant factors, which inform our analysis. *Id.* at 48,759–60. Relevant factors include the non-party’s “relationship with the petitioner” and “relationship to the petition itself, including the nature and/or degree of involvement in the filing; and the nature of the entity filing the petition.” *Id.*

In *Taylor v. Sturgell*, the Supreme Court identified six categories of exceptions to the general rule that a non-party is not estopped, precluded, or otherwise bound by previous litigation, namely where: (1) the non-party “agrees to be bound by the determination of issues” in the proceeding; (2) a “pre-existing substantive legal relationship[.]” with the named party justifies binding the non-party (e.g., “assignee and assignor”); (3) the non-party, “in certain limited circumstances,” is “adequately represented” by a party with the same interests (e.g., class actions); (4) the non-party “assume[d] control” over the proceeding; (5) the non-party is bound by a prior decision and is attempting to rehear the matter through a proxy; and (6) a “special statutory scheme . . . expressly foreclos[es] successive” hearing by non-parties. 553 U.S. at 892–98 (citations and quotations omitted).

A common focus of inquiry is the fourth category, namely whether the non-party exercised or could have exercised control over a party’s

participation in the proceeding. Trial Practice Guide, at 48,759 (citing *Taylor*, 553 U.S. at 895). The concept of control generally means that “the non[-]party has the actual measure of control or opportunity to control that might reasonably be expected between two formal coparties.” *Id.* (citation omitted). In other words, the non-party “had the opportunity to present proofs and argument,” *Taylor*, 553 U.S. at 895 (citation omitted), or “to direct or control the content” of the filing, *In re Guan Inter Partes* Reexamination Proceeding, Control No. 95/001,045, Decision Vacating Filing Date, at 8 (Aug. 25, 2008). “The non[-]party’s participation may be overt or covert, and the evidence may be direct or circumstantial—so long as the evidence as a whole shows that the non[-]party possessed effective control over a party’s conduct of the [proceeding] as measured from a practical, as opposed to a purely theoretical standpoint.” *Gonzalez v. Banco Central Corp.*, 27 F.3d 751, 759 (1st Cir. 1994).

“[T]here is no bright-line test,” however, “for determining the necessary quantity or degree of participation to qualify as a ‘real [party in interest]’ . . . based on the control concept.” Trial Practice Guide, at 48,759 (citing *Gonzalez*, 27 F.3d at 759). “[A] party that funds and directs and controls” a petition or proceeding constitutes a real party in interest, “[b]ut whether something less than complete funding and control” is sufficient depends on the facts. *Id.* at 48,760.

Here, on the present record, we are persuaded that PNC is not a real party in interest in this proceeding—the Petition was not filed at PNC’s “behest,” PNC no longer “desires review” of the ’510 patent, and the other factors and categories identified in the Office Patent Trial Practice Guide

and *Taylor* do not warrant naming PNC as a real party in interest.

Patent Owner's speculation regarding an ongoing common interest and understanding between PNC and Petitioner lacks any factual basis on the record before us. *See* Prelim. Resp. 3, 9, 12, 17, 22–25.

Rather, the evidence before us shows Petitioner and PNC are entirely separate corporate entities, with no identifiable ongoing relationship. Petitioner and PNC were once co-defendants and co-members of a joint defense agreement, and previously collaborated in filing the CBM2014-00038 Petition challenging the '510 Patent in November 2013. PNC, however, “expressly abandon[ed]” the CBM2014-00038 Petition in April 2014, and withdrew from the joint defense agreement it had co-signed with Petitioner in May 2014. CBM2014-00038, Paper 11, at 3; *see* Pet. 2–3, Ex. 1012. Further, Petitioner hired new counsel, different from the counsel that previously co-represented PNC and Petitioner in CBM2014-00038, to prepare and file this Petition. Therefore, based on the evidence before us, we determine that Petitioner and PNC have had no continuing relationship since at least the conclusion of CBM2014-00038 in June 2014.

PNC also has no identifiable ongoing interest in a review of the '510 patent. All claims and counterclaims in the PNC Case, including those involving the '510 patent, were dismissed with prejudice in May 2014, Ex. 1009, and there is no evidence before us to suggest that PNC has had any interest in review of the '510 patent after this dismissal.

In addition, on the record before us, we are persuaded that PNC has not participated in or controlled the present Petition, as Petitioner expressly represents in the Petition. Pet. 2–3. Although Patent Owner contends that

overlap in some of the prior art and arguments in the CBM2014-00038 Petition and the current Petition demonstrates PNC's control and contributions in this proceeding, Prelim. Resp. 3–4, 7–9, 15–22, such overlap is not sufficient to show that PNC had any opportunity to direct or control the arguments and evidence presented in the present Petition. The similarity is understandable because the '510 patent as well as the relevant prior art and potential unpatentability arguments have not changed. Nevertheless, the current Petition indisputably has differences from the CBM2014-00038 Petition, including, but not limited to, relying on different prior art references in the asserted § 103 ground, proposing different claim terms for construction, and challenging an additional claim. *Compare* Pet., *with* CBM2014-00038, Paper 3. No evidence is before us to suggest that PNC had any involvement in directing such changes or the arguments and evidence presented in the Petition, which was prepared by new counsel retained by Petitioner alone.

Yet, because Petitioner supports the Petition with a declaration from Stephen D. Bristow, the same declarant as in CBM2014-00038, we agree with Patent Owner that the Petition “enjoys at least part of the benefit of” any payments PNC made to Mr. Bristow to prepare his declaration in CBM2014-00038, even though the declaration filed in this case is not the same as the one filed in CBM2014-00038. Prelim. Resp. 19–20; *see generally* Ex. 1017 (Decl. of Stephen Bristow); CBM2014-00038, Ex. 1002 (Decl. of Stephen D. Bristow). Nevertheless, even if we were to characterize these payments by PNC to Mr. Bristow as partial funding of the Petition, we are not persuaded that PNC had sufficient involvement in or

direction of the Petition to be a real party in interest, in light of the other facts outlined above that strongly weigh against a finding of control.

Therefore, on this record, we are not persuaded that Petitioner had the opportunity to control this proceeding. Similarly, none of the other five categories of exceptions outlined by the Supreme Court in *Taylor* is applicable to the facts of this case. *See* 553 U.S. at 892–98.

Finally, we note that a petitioner and a non-party's status as co-defendants and co-members of a joint defense group is not alone sufficient to render the non-party a real party in interest. Trial Practice Guide, at 48,760; *see, e.g., Petroleum Geo-Servs. Inc. v. WesternGeco LLC*, Case IPR2014-00687, slip op. at 16 (PTAB Dec. 15, 2014) (Paper 33) (holding petitioner and non-party's shared interest in invalidating patent at issue, "collaborat[ion] together, and invo[cation of the] common interest privilege with respect to sharing potentially invalidating prior art references" was insufficient to render non-party a real party in interest). In our view, based on the facts before us, PNC and Petitioner's terminated collaboration in preparing the CBM2014-00038 Petition, while co-defendants and co-signatories of a joint defense agreement in the MDL Proceeding, is similar to such a situation. PNC's lack of involvement or control in the subsequent preparation and funding of this Petition, prepared by different counsel and presenting different prior art and arguments, persuades us that PNC is not a real party in interest in this case.

Accordingly, based on the evidence before us at this stage of the proceeding, PNC is not a real party in interest in this case, and § 325(a)(1) does not bar institution of review.

B. SECTION 325(D) – DISCRETION TO DECLINE TO INSTITUTE

Patent Owner also urges us to exercise our discretion, under 35 U.S.C. § 325(d), to decline to institute the Petition because the “same or substantially the same prior art or arguments” were presented in CBM2014-00038 and the pending Reexamination Proceeding. Prelim. Resp. 27–30. Section 325(d) provides: “[i]n determining whether to institute or order a proceeding . . . , the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d).

For reasons that follow, we determine that the Reexamination Proceeding does not present the “same or substantially the same prior art or arguments” as this Petition and therefore, does not meet the requirement for exercise of discretion under § 325(d). The Reexamination Proceeding was requested, and granted, on the ground that U.S. Patent No. 5,982,891 (“Ginter”) anticipates under 35 U.S.C. § 102 certain claims of the ’510 patent. *See* Control No. 90/013,063, Office Action (June 3, 2014), at 2, 12. Ginter is not before us in this proceeding. Instead, the Petition relies on entirely distinct prior art references, Cremin, Hawkes, and Rivest. In addition, in contrast to the anticipation ground presented in the Reexamination Proceeding, the Petition asserts unpatentability based on obviousness and patent-ineligible subject matter. Therefore, we are not persuaded there is any overlap between the prior art and arguments presented in the Reexamination Proceeding and this proceeding. Filing notices of this Petition and the CBM2014-00038 Petition in the Reexamination Proceeding, along with copies of the relevant prior art, does

not make the arguments and art raised in these proceedings part of the Reexamination Proceeding, as Patent Owner seems to suggest. *See* Control No. 90/013,063, Information Disclosure Statement (filed Sept. 30, 2014); Control No. 90/013,063, Notice of Prior & Concurrent Proceedings Under 37 C.F.R. § 1.565(a) (filed Sept. 30, 2014).

Moreover, we need not address whether the earlier CBM2014-00038 Petition involved the same or substantially the same prior art or arguments as this Petition. Even if this requirement of § 325(d) were met, we would not exercise our discretion to deny the Petition, given that the Board did not reach the merits of the unpatentability arguments in CBM2014-00038. *See* CBM2014-00038 Dec. Inst.

Relatedly, Patent Owner repeatedly asks that we “disregard[]” “all arguments not found in” the previous CBM2014-00038 Petition, asserting that these arguments are “[w]aived” and unfairly bolster the Petition. Prelim. Resp. 30–31; *see e.g., id.* at 32–34, 37–38. Petitioner has not waived arguments absent from the previous petition it filed with PNC, the merits of which were never addressed by the Board. We consider and address all the arguments presented in the Petition presently before us.

C. PETITIONER’S STANDING

To have standing, Petitioner must show that: (1) “the patent for which review is sought is a covered business method patent,” and (2) Petitioner “meets the eligibility requirements of § 42.302.” 37 C.F.R. § 42.304(a).

1. *Requirements of 37 C.F.R. § 42.302*

Petitioner satisfies both requirements of 37 C.F.R. § 42.302. First, as explained above in Section I.A, Petitioner represents in the Petition that

Patent Owner has asserted the '510 patent against Petitioner in the District Court Case. *See* Pet. 4; Paper 6, at 2. Thus, Petitioner “has been sued for infringement” of the '510 patent. Leahy-Smith American Invents Act (“AIA”), Pub. L. No. 112-29, § 18(a)(1)(B), 125 Stat. 284, 330 (2011); 37 C.F.R. § 42.302. Second, we agree with Petitioner’s representation, which is not contested by Patent Owner, that Petitioner is not estopped from pursuing CBM review under 35 U.S.C. § 325(e)(1) because Petitioner’s previous challenge to the '510 patent in CBM2014-00038 did not result in a final written decision. 37 C.F.R. § 42.302(b); Pet. 8–9.

2. *Covered Business Method Patent*

A “covered business method patent,” as defined in the AIA, is “a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.” AIA, § 18(d)(1); *accord* 37 C.F.R. § 42.301(a). In determining whether a patent is eligible for CBM review, the focus is on the claims. *See* 37 C.F.R. § 42.301; Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012) (“CBM Final Rules”). One claim directed to a covered business method is sufficient to render the patent eligible for review. *Id.*

a. *Financial Product or Service*

The legislative history of the AIA indicates that “‘financial product or service’ should be interpreted broadly.” CBM Final Rules, at 48,735

(response to comment 1). Specifically, the legislative history “explains that the definition of covered business method patent was drafted to encompass patents ‘claiming activities that are financial in nature, incidental to a financial activity or complementary to a financial activity.’” *Id.* (quoting 157 Cong. Rec. S5432 (daily ed. Sept. 8, 2011) (statement of Sen. Schumer)).

Petitioner argues that claim 2 of the ’510 patent is directed to a financial product or service, as confirmed by the specification of the ’510 patent as well as the litigation behavior of Patent Owner. *See* Pet. 12–16. Patent Owner does not dispute claim 2 is directed to a financial product or service. *See* Prelim. Resp. 34–38. Instead, Patent Owner contends that the ’510 patent claims challenged in CBM2014-00038 are not directed to a financial product or service, and we should not consider claim 2 because CBM2014-00038 did not challenge claim 2 or rely on claim 2 for standing. *Id.* at 35–38. As explained above, we consider and address all arguments Petitioner makes in this Petition. *See supra* Section II.B.

Claim 2 depends from claim 1, which recites a “system for communicating data securely” in which a “portable module reader . . . can be placed in communication with [a] first portable module” and “can be connected to a plurality of other devices.” Ex. 1001, 24:16–19. In claim 2, the “plurality of other devices includes at least one of a *credit card reader, a cash machine, an automatic teller machine, and a phone line.*” *Id.* at 24:37–40 (emphasis added). Based on the language of the claim, the recited system is, at a minimum, incidental or complementary to financial activities and services performed by credit card readers, cash machines, and automatic

teller machines (“ATMs”), such as electronic payments and debits, or cash transfers and withdrawals. *See David W. Gillman v. Stoneeagle Servs., Inc.*, Case CBM2013-00047, slip op. at 7–8 (PTAB Feb. 18, 2014) (Paper 11) (holding that processing payment is an “inherently financial activit[y]”); *Apple Inc. v. Sightsound Techs., LLC*, Case CBM2013-00020, slip op. at 11–12 (PTAB Oct. 8, 2013) (Paper 14) (“The electronic transfer of money is a financial activity, and allowing such a transfer amounts to providing a financial service.”).

The specification confirms that claim 2 involves financial activities. The specification states that a consumer can fill the portable module with a “cash equivalent” (Ex. 1001, at [57], 1:59), “electronic money” (*id.* at 1:67), or a “currency equivalent” (*id.* at 2:36). For example, a consumer can “take cash out of an ATM,” or “add-money station,” and “put the cash value into the portable module.” *Id.* at 1:65–2:5, 8:34–37. The consumer then can use the monetary value stored on the portable module “when buying products or services in the market place” (*id.* at 1:60–63; *see id.* at 1:64–2:5), for example, “to pay for a train fare” (*id.* at 7:13–35, 8:30–37). In such transactions, the “credit card reader” can be used “to read a user’s credit card and then, when authorized, either communicate . . . that units of exchange need to be added to the portable module or that units of exchange need to be extracted from the portable module to pay for a good, service, or credit card bill.” *Id.* at 3:15–22. Accordingly, the specification provides further evidence that the system recited in claim 2 facilitates electronic financial activities and transactions, including transferring and withdrawing monetary value, and paying for goods and services.

Accordingly, on this record, we determine that the system recited in claim 2 is directed to an “apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service.” AIA, § 18(d)(1); 37 C.F.R. § 42.301(a); *see Regions Fin. Corp. v. Retirement Capital Access Mgmt. Co.*, Case CBM 2014-00012, slip op. at 7–8 (PTAB Mar. 25, 2014) (Paper 16) (holding relevant system claims met AIA definition of covered business method patent).

b. *Technological Invention Exception*

The technological invention exception in the definition of a covered business method patent is not met by “[m]ere recitation of known technologies, such as computer hardware, . . . or specialized machines, such as an ATM or point of sale device,” or “[c]ombining prior art structures to achieve the normal, expected, or predictable result of that combination.” Trial Practice Guide, at 48,763–64. To determine whether a patent is for a technological invention, we consider “whether the claimed subject matter as a whole”: (1) “recites a technological feature that is novel and unobvious over the prior art;” and (2) “solves a technical problem using a technical solution.” 37 C.F.R. § 42.301(b); *see* CBM Final Rules, at 48,736. Both the first and second prong must be met for the technological invention exception to apply. *Agilysys, Inc. v. Ameranth, Inc.*, Case CBM2014-00014, slip op. at 11 (PTAB Mar. 26, 2014) (Paper 19); *see Google Inc. v. Inventor Holdings, LLC*, Case CBM2014-00002, slip op. at 10 (PTAB Apr. 1, 2014); 157 Cong. Rec. S1364 (daily ed. Sept. 8, 2011) (statement of Sen. Schumer).

Regarding the first prong—whether the subject matter as a whole recites a “technological feature that is novel and unobvious over the prior

art”—Petitioner contends that each of the technological features recited in the ’510 patent claims was generic, common, and conventional in 1996, when the application that issued as the ’510 patent was filed. Pet. 17–19. Petitioner further argues that the combination of these features merely achieves the normal, expected, and predictable result of the combination. *Id.* On this record, we agree.

The ’510 patent claims, including claim 2, recite many technological features—nonvolatile memory, clock circuits, a counter, input/output circuits, memory circuits, a microcontroller core, a math coprocessor, an energy circuit, a credit card reader, a cash machine, an ATM, and a phone line. Petitioner proffers testimony from Mr. Bristow supporting its contention that each technological feature recited in the ’510 patent claims was generic and common before 1996, and their combination yields predictable results. *See* Ex. 1017 ¶¶ 19, 30–34, 52–54. For example, Mr. Bristow, citing an article published in the *New York Times* in 1986, explains that math coprocessors were recognized in the field for effectiveness in encryption calculations. *Id.* ¶ 34.b (citing Ex. 1016).

In addition, the specification of the ’510 patent refers to each technological feature briefly and generally by reference to its function, without any detail or particularity that would suggest, or that might be expected of, a disclosure of new technology, e.g., “counter 206 for keeping track of the number of transactions the module has performed,” “timer [208] . . . to provide the ability to time stamp transactions.” *See* Ex. 1001, 3:1–27, 3:39–5:62. For some of the features, the specification discusses using known structures or devices, and certain versions of available

products. *E.g., id.* at 2:36–45, 4:56–58, 5:38–40. Thus, we are persuaded that the '510 patent claims, including claim 2, recite technological features that were known and conventional at the time of filing in 1996.

We are not persuaded by Patent Owner's arguments to the contrary. Patent Owner contends that the prosecution history of the '510 patent demonstrates the claims are directed to novel and nonobvious technological features, because the '510 patent issued after the applicants amended the claims and argued that “none of the art cited to date” included a “secure microcontroller having a dedicated math co-processor” and “combin[ed] a real time clock and a counter, along with a substantially unique electronically readable identification number.” Prelim. Resp. 40, 46–52; Ex. 1017, 208. But neither the applicants' arguments for allowance, nor the allowance of the '510 patent, is “dispositive of the issue before us,” which is “based on a different record than what was before the examiner.”

Bloomberg Inc. v. Markets-Alert Pty Ltd., Case CBM2013-00005, slip op. at 7–8 (PTAB Mar. 29, 2013) (Paper 18).

In addition, Patent Owner points to a statement made in a hearing in the MDL Proceeding by counsel for PNC, which Patent Owner characterizes as being made on behalf of Petitioner and as representing that math coprocessors were new at the time of filing of the '510 patent in 1996. Prelim. Resp. 42–45. Specifically, counsel stated: “back in the 1990s math coprocessors were something that were new. It's now many, many years later and computers don't have math coprocessors anymore. So Maxim is going to have problems proving these things because these are old technologies in their patents.” Ex. 2001, 44:5–9. We are not persuaded it is

reasonable to interpret this statement to represent or imply that math coprocessors were a point of novelty in the '510 patent claims in 1996, as Patent Owner proposes. Moreover, even if we agreed with Patent Owner's characterization of counsel's statement and that it was made on behalf of all defendants, we are not persuaded that representations made by counsel for PNC—not Petitioner—in the MDL Proceeding should be relevant to, or held against Petitioner in, this proceeding. *See id.* at 2:21–22 (listing relevant counsel as appearing on behalf of PNC); *id.* at 10:2–4, 41:15–16, 43:9–10, 44:15–17; Pet. 20–21.

Similarly, we are not persuaded by Patent Owner's argument that claim 2, which recites a “credit card reader,” is analogous to an example of a technological invention provided in the Office Patent Trial Practice Guide— “[a] patent that claims *a novel and non-obvious* credit card reader for verifying the validity of a credit card transaction.” Prelim. Resp. 56–59; Trial Practice Guide, at 48,764 (emphasis added). Merely reciting a “credit card reader” does not bring claim 2 in line with this example. Rather, the recited credit card reader, or another technological feature, must be “novel and non-obvious”—and based on the record before us, they are not.

Moreover, Patent Owner faults the Petition for being conclusory in addressing the claims as a whole, and in relying “solely” on Petitioner's asserted grounds of unpatentability. *See* Prelim. Resp. 41, 45–46, 48–51. We disagree. Petitioner's arguments on the issue are sufficiently detailed and provide supporting citations to the specification and Mr. Bristow's testimony. *See* Pet. 16–21. The Petition refers to the asserted grounds of

unpatentability only as “further” evidence that the claims lack a novel and nonobvious technological feature. *Id.* at 18–19.

On the record before us, we are persuaded that combining the known technological features recited in the ’510 patent claims to achieve only “secure data transfers” is insufficient to render the combination anything but the “normal, expected, or predictable result of that combination.” Trial Practice Guide, at 48,764; Ex. 1001, 24:34–37. Accordingly, on this record, we are persuaded the ’510 patent claims, particularly claim 2, are not directed to a novel and nonobvious technological feature.

Because we have determined that the ’510 patent does not satisfy the first prong of the analysis for the technological invention exception, the ’510 patent does not fall within this exception. Therefore, we need not reach the second prong of the analysis, namely whether the subject matter “solves a technical problem using a technical solution.”

For the reasons given above, we determine that the ’510 patent is eligible for review as a covered business method patent.

D. CLAIM CONSTRUCTION

We turn to the meaning of the claims. The Board interprets claims using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.300(b); *see In re Cuozzo Speed Techs., LLC*, No. 2014-1301, 2015 WL 448667, at *5–*8 (Fed. Cir. Feb. 4, 2015). We presume a claim term carries its “ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question” at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Here, neither Petitioner nor Patent Owner has proposed any claim terms for construction. For purposes of deciding whether to institute review, however, we must address whether the “secure microcontroller based module . . . said secure microcontroller comprising,” recited in claim 1, requires the recited components—“a microcontroller core,” “a math coprocessor,” “an energy circuit,” “memory circuit[s],” and “a second real time clock circuit”—to be on a single chip. Ex. 1001, 24:19–33.

In analyzing the scope of the “secure microcontroller based module . . . said secure microcontroller comprising,” as recited in claim 1, we begin with the claims. The ’510 patent claims provide no guidance as to whether the recited components of the “secure microcontroller” must be on a single chip. Some of the recited components are “in communication with” and “connected to” one another, *id.* at 24:19–33, but such communications and connections are possible on the same chip or multiple chips.

The term “secure microcontroller based module” does not appear outside the claims. In the written description, the terms “micro controller” and “microprocessor” appear to be used interchangeably, and are represented by the same reference numeral, 12. *See id.* at 4:24–33, 4:55–57, 5:36–57, Fig. 3; 37 C.F.R. § 1.74, 1.84(p)(4) (“[T]he same reference character must never be used to designate different parts.”). Based on our review of the specification, we understand the recited “secure microcontroller based module” to correspond with secure microprocessor based device 108 in the written description, and illustrated in Figure 3. *See* Ex. 1001, 2:25–26, 4:24–33, Figs. 1, 3.

The specification, referring to Figure 3, explains that secure microprocessor based device 108, in a preferred embodiment, “comprises a microprocessor 12, a real time clock 14, control circuitry 16, a math coprocessor 18, memory circuitry 20, input/output circuitry 26, and an energy circuit 34.” Ex. 1001, 4:24–33. The specification also states “[t]he secure device circuitry can be a single integrated circuit. It is understood that *secure device 108 could also be a monolithic or multiple circuits combined together.*” *Id.* at 4:24–29 (emphases added). Thus, the specification discloses that secure device 108 encompasses the relevant components on either a single integrated circuit, i.e., chip, or multiple chips.

In addition, in discussing “preferred secure module 108,” the specification, again referring to Figure 3, explains that “micro controller 12, clock 14, memory 20, buffers 28, 30, one-wire front-end 32, modular exponentiation accelerator 18, and control circuitry 16 are *preferably integrated on a single silicon chip.*” *Id.* at 5:36–54 (emphasis added). The specification continues “[o]ne of ordinary skill will understand that there are many comparable variations of the module design.” *Id.* at 5:58–60. Thus, including all of the components of the recited “secure microcontroller” on a single chip is a preferred embodiment.

“[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1342 (Fed. Cir. 2010); *see Braintree Labs., Inc. v. Novel Labs., Inc.*, 749 F.3d 1349, 1354 (Fed. Cir. 2014). Here, the references to

the components of secure module 108 being integrated on a single chip are only with respect to a preferred embodiment. Contrary to any clear indication that the patentee intended the recited “secure microcontroller based device” to be so limited, the specification explicitly discloses other embodiments in which the components of secure module 108 are on “multiple circuits combined together.” Ex. 1001, 4:24–29.

Accordingly, we determine that, under the broadest reasonable interpretation, “secure microcontroller based module . . . said microcontroller comprising” encompasses the recited components on either a single chip or multiple chips.

E. ASSERTED GROUNDS UNDER § 103

1. *Obviousness over Cremin and Hawkes (Claims 1–3)*

Petitioner argues claims 1–3 of the ’510 patent would have been obvious under 35 U.S.C. § 103 over Cremin and Hawkes. Pet. 32–63. Patent Owner elected not to address the merits of Petitioner’s obviousness assertions at this stage of the proceeding. Prelim Resp. 61–62, 77.

a. *Cremin*

Cremin discloses “portable devices,” or cards, that securely store data, and transfer such data through an associated coupling terminal. Ex. 1003, [57], 1:13–15, 2:10–13, 5:12–6:12. Cremin explains that the disclosed cards are intended to be secure, including by providing for encryption of stored data and by protecting against “fraudulent transfer of data [caused] by replaying a transaction an unlimited number of times.” *Id.* at 1:16–2:33.

We are persuaded, on this record, that Cremin teaches or suggests all of the limitations of claims 1–3, with the exception of “a counter for

counting a transaction count.”¹ In particular, Cremin discusses an embodiment of a “funds transfer system,” in which a consumer holds a “consumer card” (“first portable module”), into which wages or other funds may be transferred, and from which funds may be transferred for purchases. *Id.* at 5:12–26. A trader holds a “trader card” (“secure microcontroller based module”). *Id.* at 5:22–6:4; *see id.* at 10:2–3, 12:1–16. The consumer card and trader card are placed in slots of coupling terminal 2 (“portable module reader”), which can be connected through a telephone line to a bank computer (claim 2). *Id.* at 1:10–14, 6:1–9, 9:16–10:3, 10:21–34, 12:1–16, Fig. 5. The consumer card then securely transfers funds to the trader card through the coupling terminal (“said combination . . . performing secure data transfers”). *Id.* at 2:10–31, 6:5–9, 12:1–13:28.

The consumer card (“first portable module”) contains: (1) a serial number that can be transferred to the trader card (“identification number” limitation); (2) battery-powered RAM memory 7 that stores encrypted data (“nonvolatile memory” limitation; claim 3); and (3) micro-computer 10, including clock generator 15, which “date and time stamps each transaction” (“first real time clock circuit” limitation), and which also includes I/O driver 16 (“input/output circuit” limitation) and central processing unit 12 that is linked or connected to clock generator 15, memory 7, and I/O driver 16 (“memory control circuit” limitation). *Id.* at [57], 3:25–26, 4:17–18; 6:18–7:28, 8:9–14; 12:27–31, 13:14–21, Fig. 2; Ex. 1017 ¶ 30.a.

¹ Petitioner also argues that Hawkes discloses many of these limitations, as well as the additional limitations of claims 5 and 6. *See* Pet. 46-70. We need not address these alternative arguments at this stage of the proceeding.

The trader card (“secure microcontroller based module”), which is “substantially similar” to the consumer card, contains: (1) micro-computer 10, including central processing unit 12 (“microcontroller core” limitation) and other components linked or connected to central processing unit 12, such as clock generator 15 (“second real time clock circuit” limitation), ROM 11, and RAM 14 (“memory circuit connected to” limitation); (2) security chip 20, linked to micro-computer 10, which performs encryption and decryption calculations (“math coprocessor” limitation); (3) battery 37, which is rechargeable and powers the card (“energy circuit” limitation); and (4) memory 7 linked to central processing unit 12 (“memory circuit in communication with” limitation). *Id.* at [57], 3:25–26, 6:2–4, 7:7–16, 7:22–31, 8:3–16, 9:1–2, 11:13–17.

b. *Hawkes*

Hawkes provides an overview of the history and development of smart cards, tags, and tokens. Ex. 1004, v–xi, 3–4. Chapter 8 of Hawkes describes a smart card using techniques for security against passive and active attacks on data. *Id.* at 136–37.

We are persuaded, on the record before us, that Hawkes teaches or suggests “a counter for counting a transaction count,” as recited in claim 1. In particular, chapter 8 of Hawkes explains that to prevent an attack in which a message is reused, “all messages should carry a sequence number of some form.” *Id.* at 153. Where messages are being passed between only two entities (one source and one destination), the destination, by checking the sequence number, can confirm that the sequence is increasing (i.e., no messages are reused) and the sequence is complete (i.e., no messages are

deleted). *See id.* Where a source is sending messages to more than one destination, however, the destination can confirm that the sequence is increasing (i.e., no messages are reused) but cannot confirm the sequence is complete (i.e., no messages are deleted). *Id.*

c. Combination of Cremin and Hawkes

In addition, on the present record, we are persuaded that one of ordinary skill would have been motivated to combine Hawkes’ teaching or suggestion of a “counter for counting a transaction count” with the system disclosed in Cremin, and would have had a reasonable expectation of success in doing so. *See* Pet. 44; Ex. 1017 ¶ 52. As Mr. Bristow testifies, a motivation for this combination would have been increased security, particularly against improper reuse of messages, a stated concern of both references. Ex. 1017 ¶ 52; Ex. 1003, 2:1–15, 3:25–29, 14:28–15:1; Ex. 1004, 153. In addition, at this stage of the proceeding, we credit the testimony of Mr. Bristow that Cremin’s date and time stamp and the counter taught or suggested in Hawkes are complementary means to prevent reuse of messages, and one of ordinary skill readily would be able to implement them together using generic computer components. Ex. 1017 ¶ 52.

Accordingly, based on our review of the record before us, we determine Petitioner has demonstrated that it is more likely than not claims 1–3 would have been obvious over Cremin and Hawkes.

2. Obviousness over Cremin, Hawkes, and Rivest (Claims 5 and 6)

Petitioner argues claims 5 and 6 of the ’510 patent would have been obvious under 35 U.S.C. § 103 over Cremin, Hawkes, and Rivest. Pet. 32–70. As with the asserted ground relying on Cremin and Hawkes addressed

above, Patent Owner did not contest the merits of Petitioner’s assertions in the Preliminary Response. Prelim Resp. 61–62, 77.

a. *Rivest*

Rivest discloses a novel public key encryption method, which became known as RSA encryption, after the authors, Rivest, Shamir, and Adleman. Ex. 1005, 121; *see* Ex. 1004, xiv (listing acronym RSA). In contrast to classical encryption methods in which all keys must remain private, Rivest’s method allows for each user to have a public encryption key, along with a private decryption key. Ex. 1005, 121–22. Rivest details a mathematical algorithm for generating a private and public key pair, beginning with the selection of two large, random prime numbers p and q . *Id.* at 122–24.

b. *Combination of Cremin, Hawkes, and Rivest*

In claims 5 and 6, each of which depend directly from claim 1, “said first module”² and “said secure microcontroller,” respectively, “can create random public/private key sets for encryption purposes.” Ex. 1001, 24:48–53. We are persuaded that the combination of Cremin and Rivest teaches the additional limitation of each of these claims. Specifically, Cremin states that security chip 20 in the disclosed card “encodes and decodes data being transferred to and from the card 1 by a public key and secret key encr[y]ption technique. Such technique is described in detail by Rivest.” Ex. 1003, 7:28–8:2; *see id.* at 6:2–4. As explained above, Rivest details a mathematical algorithm for implementing public key-private key encryption. Accordingly, we are persuaded that Cremin and Rivest, together, teach that

² For purposes of this decision, we treat the recited “said first module” in claim 5 as referring to the “first portable module” in claim 1. *See* Pet. 63.

Cremin's consumer card and trader card "can create random public, private key sets for encryption purposes," as recited in claims 5 and 6.

In addition, we are persuaded that one of ordinary skill would have been motivated to make this combination, with a reasonable expectation of success. *See* Pet. 64–65; Ex. 1017 ¶¶ 55–57. Cremin explicitly implements Rivest's encryption method on its disclosed card. *See* Ex. 1003, 7:28–8:2. Consistent with Cremin's and Rivest's goals of increased security (Ex. 1004, 2:10–20; Ex. 1005, 126), Mr. Bristow explains security benefits from generating private and public keys directly on the card, including that private keys never need to be communicated at the risk of interception. Ex. 1017 ¶¶ 55–57. Further, at this stage of the proceeding, we credit Mr. Bristow's testimony that one of ordinary skill could "implement software to generate RSA keys on . . . the processor/coprocessor configuration in Cremin," based on the disclosures of the two references. *Id.* ¶ 42; *see id.* ¶ 57.

For these reasons, in addition to our reasoning outlined above regarding independent claim 1, we determine Petitioner has demonstrated that it is more likely than not that claims 5 and 6 would have been obvious over Cremin, Hawkes, and Rivest.

F. ASSERTED GROUND UNDER § 101 (CLAIMS 1–3, 5, AND 6)

Petitioner argues claims 1–3, 5, and 6 of the '510 patent are unpatentable under 35 U.S.C. § 101 as directed to a patent-ineligible abstract idea. Pet. 70–79. Patent Owner contests this assertion. Prelim. Resp. 62–77.

Section 101 provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to

the conditions and requirements of this title.” “In choosing such expansive terms . . . modified by the comprehensive ‘any,’ Congress plainly contemplated that the patent laws would be given wide scope.” *Bilski v. Kappos*, 561 U.S. 593, 601 (2010) (citations and quotations omitted).

There are, however, three limited, judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: “[l]aws of nature, natural phenomena, and abstract ideas.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012). The concern underlying these exceptions is “one of pre-emption.” *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). Specifically, given that “[l]aws of nature, natural phenomena, and abstract ideas are the basic tools of scientific and technological work,” “[m]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws.” *Id.* (quotations and citations omitted). Yet we must “tread carefully in construing” these exceptions, because “[a]t some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Alice*, 134 S. Ct. at 2354 (quoting *Mayo*, 566 U.S. at 1293) (quotations omitted). Thus, “an invention is not rendered [patent-]ineligible . . . simply because it involves an abstract concept.” *Id.*

The Supreme Court has established a two-step “framework for distinguishing patents that claim . . . abstract ideas from those that claim patent-eligible applications of” abstract ideas. *Id.* at 2355. The first step is to “determine whether the claims at issue are directed to” an abstract idea. *Id.* If the claims are directed to an abstract idea, the second step is to

consider the claim elements—“both individually and as an ordered combination”—to determine whether there are additional elements that “transform the nature of the claim into a patent-eligible application” of the abstract idea. *Id.* (citation and quotation omitted). In other words, the second step is to “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 [abstract idea] itself.” *Id.* (citation and quotation omitted).

Here, starting with the first step of the framework, Petitioner argues the challenged system claims are directed to the abstract idea of “secure data transfer” or “[c]ommunicating data securely.” Pet. 71. According to Petitioner, “[t]he idea is to take arbitrary data, not restricted to any type of information or any content, and transfer that data between two entities in a way that is not susceptible to manipulation.” *Id.* Further, Petitioner contends the claims merely recite “generic computer hardware” and do not “apply the idea of secure data transactions to a specific application or field to prevent pre-empting the entire principle of secure data transfer.” *Id.* at 72–73. These arguments do not persuade us that it is more likely than not that the challenged claims are directed to an abstract idea, as we explain below.

The Petition does not address sufficiently how or why the particular claims are directed to an abstract idea. *See* Prelim Resp. 65–66. In particular, Petitioner’s arguments do not even reference the specific limitations of the challenged claims, with the exception of the preamble (“[a] system for communicating data securely”) and the phrase “performing secure data transfers” in claim 1. Pet. 72–73. For example, the recited “first

portable module” and “secure microcontroller based module” contain a handful of tangible physical components, some with specific connections (e.g., “memory circuit *connected to* said microcontroller core”; “math coprocessor, *in communication* with said microcontroller core”) and functions (e.g., “nonvolatile memory *for storing a first data*”; “first real time clock circuit *for time stamping data transactions*”; “math coprocessor . . . *for processing encryption calculations*”). Ex. 1001, 24:1–36 (emphases added). Claim 2, as Patent Owner points out, adds additional concrete physical components, i.e., “one of a credit card reader, a cash machine, an automatic teller machine, and a phone machine.” *Id.* at 24:37–40; Prelim Resp. 68. Yet Petitioner’s arguments overlook these various physical components in proposing that the challenged claims are directed to an abstract idea.

Petitioner’s analogies to alleged historical examples of secure transfer of data are no substitute for a specific analysis regarding how or why the specific claim language supports Petitioner’s assertion that the claims are directed to the abstract idea of secure data transfer. *See* Pet. 72. Nor does the Petition adequately tie these examples to the specific claim language, or otherwise sufficiently explain how they relate to the challenged claims. *See* Prelim Resp. 65–66. It is not clear how these examples, including placing a wax seal on a document, encasing cuneiform tablets in clay envelopes, and signing a document before a notary, could be tied to the claim language. The claims include components lacking any counterpart in the examples, such as a “counter for counting a transaction count” and a “math coprocessor, in communication with said microcontroller core, for processing encryption calculations.”

Finally, we agree with Patent Owner that Petitioner, in asserting the claims are directed to the abstract idea of secure data transfer, seeks to take the claims to higher level of abstraction than is warranted. *See id.* at 64–65. We are cognizant that “[a]t some level, all inventions . . . embody, use, reflect, rest upon, or apply . . . abstract ideas,” *Alice*, 134 S. Ct. at 2354 (citations and quotations omitted), and recognize that every system can be generalized to the point of abstraction if the specific claim language is overlooked. We, likewise, agree with Patent Owner that there is no concern that the ’510 patent, considering its particular limitations individually and as a whole, could broadly preempt the field of secure data transfer. *See Alice*, 134 S. Ct. at 2354; *Bilski*, 130 S. Ct. at 611–612; Prelim. Resp. 69.

In sum, Petitioner’s generalized arguments are insufficient to show that the claims are directed to an abstract idea. Based on our review of each claim, as a whole, we are not persuaded they are directed to an abstract idea. Thus, we need not turn to the second step of the relevant framework.

Accordingly, Petitioner has not demonstrated that it is more likely than not that claims 1–3, 5, and 6 are unpatentable under § 101.

III. ORDER

For the reasons given, it is:

ORDERED that pursuant to 35 U.S.C. § 324(a), a covered business method patent review of claims 1–3, 5, and 6 of the ’510 patent is instituted, commencing on the entry date of this Decision;

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; and

FURTHER ORDERED that the trial is limited to the following grounds of unpatentability:

Claims 1–3 under 35 U.S.C. § 103 as obvious over Cremin and Hawkes;

Claims 5 and 6 under 35 U.S.C. § 103 as obvious over Cremin, Hawkes, and Rivest.

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Patent 5,940,510

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