Paper No. 12 Filed: August 2, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SALLY BEAUTY HOLDINGS, INC., SALLY BEAUTY SUPPLY LLC, SALLY HOLDINGS LLC, SALLY INVESTMENT HOLDINGS LLC, and BEAUTY SYSTEMS GROUP LLC, Petitioner,

V.

INTELLECTUAL VENTURES I LLC, Patent Owner.

Case CBM2016-00029 Patent 5,969,324

Before KARL D. EASTHOM, KEVIN F. TURNER, and KEVIN W. CHERRY, *Administrative Patent Judges*.

TURNER, Administrative Patent Judge.

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

I. INTRODUCTION

A. Background

Sally Beauty Holdings, Inc., Sally Beauty Supply LLC, Sally Holdings LLC, Sally Investment Holdings LLC, and Beauty Systems Group LLC ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting a review under the transitional program for covered business method patents of U.S. Patent No. 5,969,324 (Ex. 1001, "the '324 Patent"). Intellectual Ventures I LLC ("Patent Owner") filed a Preliminary Response (Paper 8, "Prelim. Resp."). We have jurisdiction under 35 U.S.C. § 324.

The standard for instituting a covered business method patent review is set forth in 35 U.S.C. § 324(a), which provides as follows:

THRESHOLD.—The Director may not authorize a post-grant review to be instituted unless the Director determines that the information presented in the petition filed under section 321, 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.

Petitioner challenges the patentability of claims 1–14 of the '324 Patent under 35 U.S.C. §§ 101, 102, and 103. Patent Owner has disclaimed claim 14 (Ex. 2005), such that claims 1–13 ("the challenged claims") remain to be challenged in the instant proceeding.

In addition, Patent Owner certified that the '324 Patent will expire within 18 months from entry of the Notice of Filing Date Accorded to the Petition and requested that the claims be construed under the *Phillips* standard for claim construction. Prelim. Resp. 15. Patent Owner has acknowledged that the '324 Patent will expire on April 10, 2017. We previously ordered, pursuant to a conference call (Paper 6), that Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, 81 Fed. Reg.

18,750 (Apr. 1, 2016), effective May 2, 2016, would apply in the instant proceeding and we authorized additional briefings by the parties addressing the change in the claim construction standard. Petitioner filed such a briefing (Paper 9, "CC Br."), and Patent Owner filed responsive briefing (Paper 10, "CC Br. Resp.") thereafter.

Taking into account Patent Owner's Preliminary Response, and the parties' claim construction briefings, we determine that the Petition demonstrates that it is more likely than not that at least one of the challenged claims is unpatentable. Pursuant to 35 U.S.C. § 324, we institute a covered business method patent review of all of the challenged claims of the '324 Patent.

B. Related Matters

The parties inform us that the '324 Patent is the subject of the following lawsuit: *Intellectual Ventures I LLC et al. v. Sally Beauty Holdings, Inc. et al.*, Case No. 2-15-cv-001414-JRG (E.D. Tex.). Pet. 3; Paper 4, 1.

C. The '324 Patent

The '324 Patent relates to methods, systems, and devices for electronic recordkeeping of accounting data. Ex. 1001, 1:31–32. The Specification discusses the disadvantages of prior bookkeeping systems, and discloses the use of nonpredictable bar codes to identify transactions that are downloaded to an end user. *Id.* at 1:35–50, 2:33–39. From a point of sale terminal, transaction information, including a list of items purchased, the amounts charged or credited for each item, and the date and time of the transaction, are received and associated with a nonpredictable code. *Id.* at 9:24–40. That nonpredictable code may be embedded in a bar code printed on a receipt by the point of sale terminal, as illustrated in Fig. 3, reproduced below. *Id.* at

6:46–54. Subsequently, the end user can scan the transaction receipt with the bar code and the resultant information can be transmitted to the end user's computer. *Id.* at 9:41–60.

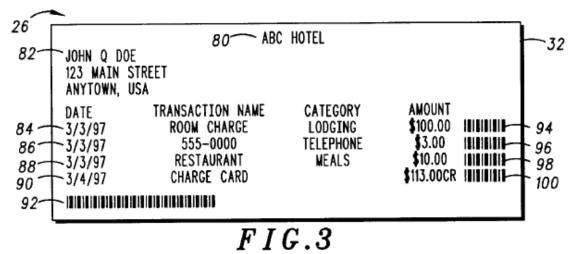


Fig. 3 of the '324 Patent illustrating an exemplary transaction receipt.

D. Illustrative Claim

Claims 1 and 9 are independent, claim 1 is considered representative of the claims challenged, and claim 1 is reproduced below:

1. A database management method comprising the steps of:

receiving and storing transaction information associated with a nonpredictable bar code, the transaction information generated by a transaction terminal;

receiving a request for the transaction information including data associated with the nonpredictable bar code;

retrieving the transaction information based upon the nonpredictable bar code; and

communicating the transaction information.

Id. at 11:22–31.

E. Evidence of Record

Petitioner relies on the following references and declarations (*see* Pet. 40–67; Paper 9, 3–9):

Reference or Declaration	Exhibit No.
U.S. Patent No. 5,401,944 ("Bravman")	Ex. 1011
U.S. Patent No. 5,597,995 ("Williams")	Ex. 1014
U.S. Patent No. 5,367,148 ("Storch I")	Ex. 1009
International Patent Publication WO 96/27852 ("Beller")	Ex. 1015
Declaration of Dr. Michael Shamos	Ex. 1004
Supplemental Declaration of Dr. Michael Shamos	Ex. 1017

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds (*see* Pet. 25–80):

Claims Challenged	Basis	Reference(s)
1–13	§ 101	
1–13	§ 102	Bravman
1–13	§ 103	Williams and Storch I
1–13	§ 103	Beller and Storch I

II. ANALYSIS

A. Standing to Seek Covered Business Method Patent Review

Section 18 of the AIA¹ provides for the creation of a transitional program for reviewing covered business method patents. Section 18 limits review to persons or their privies that have been sued or charged with infringement of a "covered business method patent," which does not include patents for "technological inventions." AIA §§ 18(a)(1)(B), 18(d)(1).

37 C.F.R. § 42.302 states "[c]harged with infringement means a real and

¹ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284, 329 (Sept. 16, 2011) ("AIA").

substantial controversy regarding infringement of a covered business method patent exists such that the petitioner would have standing to bring a declaratory judgment in Federal court."

Petitioner states that it was charged with infringement of at least one claim of the '324 Patent, as identified in Section I.B above. Pet. 4–5. Patent Owner does not dispute this statement.

i. Financial Product or Service

A covered business method patent "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). 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." *Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention*, 77 Fed. Reg. 48,734, 48,735, 37 C.F.R. § 42.301(a) (Aug. 14, 2012) (Final Rule) (quoting 157 Cong. Rec. S5432 (daily ed. Sept. 8, 2011) (statement of Sen. Schumer)). The legislative history indicates that "financial product or service" should be interpreted broadly. *Id.* A patent need have only one claim directed to a covered business method to be eligible for review. *Id.* at 48,736 (Response to Comment 8).

Petitioner argues that the '324 Patent claims relate to a financial product or service, citing claims 1 and 9 and its recitation of "transaction information," as well as discussion in the Specification and Figures which detail the communication of information in a transaction receipt generated at a point of

sale terminal. Pet. 11. Patent Owner disputes those findings and raises several argument in rebuttal. Prelim. Resp. 1–14.

First, Patent Owner argues that Blue Calypso LLC v. Groupon, Inc., 815 F.3d 1331, 1338 (Fed. Cir. 2016) requires that "[t]he proper standard to apply when assessing the financial product or service prong of CBM eligibility is whether the claims of the patent, as construed, expressly or inherently recite a financial component." Id. at 2-4. Patent Owner continues that neither claim 1 nor claim 9 expressly or inherently recite a financial component, because "transaction information" is not exclusive to the financial sector, involving technology common in business environments across different sectors. *Id.* at 5–9 (citing J.P Morgan Chase & Co. v. Intellectual Ventures II LLC, CBM2014-00160, Paper 11 (PTAB Jan. 29, 2015); Fedex Corp. v. Katz, CBM2015-00053, Paper 9 (PTAB June 29, 2015); Par Pharm., Inc. v. Jazz. Pharms., Inc., CBM2014-00149, Paper 12 (Jan. 13, 2015)). Patent Owner also points out that disclaimed claim 14, discussed above, should not be a basis for this determination. *Id.* at 8 n.1. Lastly, Patent Owner argues that the Specification of the '324 Patent does not limit the scope of the claims to a financial product or service, and that we should disregard Petitioner's legislative history arguments. *Id.* at 9–14. We do not agree.

We are persuaded by Petitioner that at least one claim claims a method for performing data processing or other operations used in the practice, administration, or management of a financial product or service, namely claim 1. Claim 1 explicitly recites that the information that the method is performed on is "transaction information." Although claim 1 could be used with any number of transactions in a non-financial environment, the clear thrust of the '324 Patent is toward financial transactions. *See* Ex. 1001, 2:35–40, Figs. 3–

6.

In addition, we are not persuaded that an exclusivity to the financial sector test is a proper inquiry to make, given the legislative history indicating that "financial product or service" should be interpreted broadly, as discussed above. Where a broad claim could be interpreted as being applicable to both a financial product or service, and to a non-financial product or service, such an exclusivity test would excise all claims from consideration that do not implicitly recite such a product or service. This would run counter to even Patent Owner's formulation that claims can "inherently" recite a financial component. *See* Prelim. Resp. 5. As well, although we acknowledge that "transaction" and "transact" can have meanings outside of business or finance, the clear implication from the Specification of the '324 Patent, as discussed above, is that the claimed "transaction information" is directed to use with a financial product or service.

Upon this record, we determine that Petitioner has established that at least one claim recites a method directed to a financial product or service sufficient to meet a criterion for instituting a covered business method patent review.

ii. Technological Invention

The definition of "covered business method patent" in Section 18(d)(1) of the AIA does not include patents for "technological inventions." To determine whether a patent is for a technological invention, we consider "whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution." 37 C.F.R. § 42.301(b). Both prongs must be satisfied in order for the patent to be excluded as a technological invention.

The following claim drafting techniques, for example, typically do not render a patent a "technological invention":

- (a) Mere recitation of known technologies, such as computer hardware, communication or computer networks, software, memory, computer-readable storage medium, scanners, display devices or databases, or specialized machines, such as an ATM or point of sale device.
- (b) Reciting the use of known prior art technology to accomplish a process or method, even if that process or method is novel and non-obvious.
- (c) Combining prior art structures to achieve the normal, expected, or predictable result of that combination.

77 Fed. Reg. 48,756, 48,763–64 (Aug. 14, 2012).

Petitioner argues that the '324 Patent is not for a technological invention because none of the claims recite a technological feature that is novel and nonobvious over the prior art. Pet. 12–18. Petitioner, further, argues that the '324 Patent is not for a technological invention because none of the claims solve a technical problem using a technical solution. *Id.* at 18–20. According to Petitioner, most of the terms recited in the claims are directed to generic, well-known components when the '324 Patent application was filed. *Id.* at 13–14. Petitioner also discusses the use of the claimed "nonpredictable bar code" and points out that the '324 Patent concedes that such bar codes were known at that time. *Id.* at 14–15 (citing Ex. 1001, 3:19–37; Ex. 1004 ¶¶ 34–47).

Patent Owner does not argue that the claims of the '324 Patent recite a novel and unobvious technological feature. We are persuaded by Petitioner that the '324 Patent is not for a technological invention because at least claim 1 does not satisfy the first prong of the test. Claim 1 does not recite a technological feature that is novel or unobvious over the prior art. Claim 1

recites, in part, "receiving and storing transaction information *associated* with a nonpredictable bar code," such that no bar code need be scanned to meet the claim limitations, so that the claim only requires the manipulation of information. The steps of receiving a request for information, retrieving that information, and communicating that information were all known processes that are generally performed by computers during the relevant time period, i.e., at the time of filing the '324 Patent. *See* Ex. 1001, 1:35–63. Therefore, we find that at least claim 1 does not recite a technological feature that is novel or unobvious over the prior art and does not satisfy the first prong of the test.

For the reasons discussed above, we are persuaded by Petitioner that the '324 Patent is eligible for covered business method patent review.

B. Claim Construction

The claims of an unexpired patent are interpreted using the broadest reasonable interpretation in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.300(b); *Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131 (2016). In the instant proceeding, as discussed above, Patent Owner has certified that the '324 Patent will expire within 18 months from the entry of the Notice of Filing Date Accorded to the Petition and requests that the claims be construed under district court-type standard for claim construction. Prelim. Resp. 15. As such, we apply the claim construction standard for patents that cannot be amended as enunciated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In the Petition, Petitioner proposes a construction for "nonpredictable bar code" and "pseudorandom sequence" and "pseudorandom portion," as

those limitations are recited in independent claims 1 and 9, and dependent claims 7 and 13, respectively. Pet. 22–25. Petitioner argues that the '324 Patent does not define "nonpredictable bar code," but includes specific examples, such that Petitioner asserts that "nonpredictable bar code" should be construed as "a bar code encoding one or more characters which are not determinable by unauthorized parties." *Id.* at 22–24. With respect to the "pseudorandom" limitations, Petitioner asserts that they should be construed to be "a sequence of characters selected by a definite computational process, but that satisfy one or more standard tests for statistical randomness." *Id.* at 24–25. In the Preliminary Response, Patent Owner does not appear to contest the constructions of the "pseudorandom" limitations, but argues that the claim limitation "nonpredictable bar code" should be given the district-court construction commensurate with the construction argued by Petitioner in the related district court litigation. Prelim. Resp. 14–17.

With respect to the parties' claim construction briefings, Petitioner argues that we should disregard Patent Owner's provided construction of "nonpredictable bar code" because the proper construction remains the same under each claim construction standard and does not affect the instant decision. CC Br. 1–2. Petitioner asserts that the prior construction provided by Petitioner in the related district court litigation has been withdrawn and its proposed construction is identical to that proffered in the Petition. *Id.* at 2–5. Petitioner also discusses the application of the Petition's grounds under what it calls the "Initial Litigation Construction." *Id.* at 5–9. Patent Owner responds that Petitioner has not changed any claim construction from those adopted in the Petition and that Patent Owner did not proffer any claim construction in its Preliminary Response such that Petitioner's Briefing should

be struck. CC Br. Resp. 1–5. Patent Owner argues that Petitioner has improperly used the supplemental claim construction briefing to bolster their original patentability arguments with new arguments and evidence. *Id.* at 2–4. Patent Owner also argues that the supplemental declaration filed with Petitioner's Briefing should be struck because Petitioner had no authorization to file that declaration. *Id.* at 5.

Addressing the last argument first, we disagree that Petitioner did not have authorization to provide a declaration with its briefing. Our Order (Paper 6) addressing the parties' briefings did not explicitly address additional evidence, but did provide Petitioner the opportunity to "detail any changes to existing grounds under the new claim construction standard." Paper 6, 4. Such a requirement implicitly allows a party to proffer evidence in the same way that evidence may be proffered to support a ground in a Petition. *See* 37 C.F.R. §§ 42.20(d), 63. It would be anomalous to allow Petitioner to offer evidence in support of an original ground but disallow its use to support an authorized change to that ground. As such, we are not persuaded that the supplemental declaration filed with Petitioner's Briefing should be struck.

Additionally, although Patent Owner argues that it did not proffer any claim construction, offering up the claim construction initially asserted in the related district court litigation was offering an alternate construction, which Patent Owner indicated was "relevant to the Board's decision on institution." Prelim. Resp. 17. Petitioner's assertions that the claim construction for "nonpredictable bar code" is the same under the broadest, reasonable and district court-type standards articulates a position that allows us to more fully understand how Petitioner views the claim language. Petitioner's discussion of the Petition's grounds under what it calls the "Initial Litigation

Construction" (CC Br. 5–9), is the discussion of the grounds under a different claim construction. Patent Owner does not appear to contest Petitioner's specific construction, only articulating that Petitioner should adopt the claim construction proffered in the related district court litigation. Given that the construction in the related district court litigation has been withdrawn, which Patent Owner dos not contest, the application of that specific construction is moot.

Upon this record and for the purposes of this Decision, we determine that the indicated claim limitations should be construed as follows:

Claim Limitation	Claim Construction
"nonpredictable bar code"	"a bar code encoding one or more characters
	which are not determinable by unauthorized
	parties"
"pseudorandom	"a sequence of characters selected by a
sequence" and	definite computational process, but that
"pseudorandom portion"	satisfy one or more standard tests for
	statistical randomness"

Based on our review of the record before us, no explicit construction of any other claim term is needed at this time.

C. 35 U.S.C. § 101 i. Section 101 Subject Matter Eligibility

For claimed subject matter to be patentable eligible, it must fall into one of four statutory classes set forth in 35 U.S.C. § 101: a process, a machine, a manufacture, or a composition of matter. The Supreme Court recognizes three categories of subject matter that are ineligible for patent protection: "laws of nature, physical phenomena, and abstract ideas." *Bilski v. Kappos*, 130 S.Ct. 3218, 3225 (2010) (citation omitted). A law of nature or an abstract idea by itself is not patentable; however, a practical application of the law of

nature or abstract idea may be deserving of patent protection. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293–94 (2012). To be patentable, however, a claim must do more than simply state the law of nature or abstract idea and add the words "apply it." *Id.*

In *Alice Corp. Pty, Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347 (2014), the Supreme Court recently clarified the process for analyzing claims to determine whether claims are directed to patent-ineligible subject matter. In *Alice*, the Supreme Court applied the framework set forth previously in *Mayo*, "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S.Ct. at 2355 (citing *Mayo*, 132 S.Ct. at 1289). The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* (citing *Mayo*, 132 S.Ct. at 1296–97). If they are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims "individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (citing *Mayo*, 132 S. Ct. at 1297).

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 [ineligible concept] itself." *Id.* (alteration in original) (quoting *Mayo*, 132 S.Ct. at 1294). Further, the "prohibition against patenting abstract ideas 'cannot be circumvented by attempting to limit the use of the formula to a particular technological environment' or adding 'insignificant postsolution activity." *Bilski*, 130 S.Ct. at 3230 (citing *Diamond v. Diehr*, 450 U.S. 175,

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191–92 (1981)).

Accordingly, utilizing this framework, we review Petitioner's allegation that claims 1–13 of the '324 Patent are directed to ineligible subject matter.

ii. Statutory Category

Independent claims 1 and 9 recite a method and a system, and these claims nominally fall within the process and machine categories of statutory subject matter.

iii. Ineligible Concept

Petitioner argues that the claims of the '324 Patent are directed merely to an abstract idea of "storing and retrieving transaction information through the use of a well-known security feature." Pet. 27. Petitioner continues that the "'324 Patent itself concedes that it was intended to automate a manual process" and "the claims describe the *automation* of the fundamental economic concept of [recording and retrieving transaction information] through the use of generic computer functions." *Id.* at 27–29 (citing *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, (Fed. Cir. 2105)).

Patent Owner argues that Petitioner's analysis reads the claim term "bar code" out of its analysis. Prelim. Resp. 19, 21. Patent Owner continues that "[t]he '324 patent claims a particular, tangible, concrete method for receiving, storing, and retrieving information using a nonpredictable bar code. *Id.* at 21. We do not agree. The independent claims, such as claim 9, recite "receiv[ing] transaction information *associated* with a nonpredictable bar code," and not the use of a bar code. No scanning or querying of any type of bar code is specifically recited, such that the independent claims need only handle the associated information, post-derivation, to satisfy the steps of claim 1 or the system of claim 9. As such, from a standpoint of determining if the claims are

directed to an abstract idea, any consideration of the *use* of a nonpredictable bar code is not necessary.

With respect to step 2 of *Mayo*, i.e., whether additional elements of the claims transform the nature of the claims into a patent-eligible application of the abstract idea, Petitioner argues that claims are merely directed to performing the recited processes "using basic and indisputably well-known computing components." Pet. 29. Petitioner provides specific analysis of the additional elements of claim 1–13. *Id.* at 29–38. Patent Owner argues that Petitioner does not show that the claim elements recite no inventive concept (Prelim. Resp. 21–22), but provides no specific analysis of Petitioner's assertions.

Upon review of the Petitioner's evidence and analysis and taking into account Patent Owner's Preliminary Response, we are persuaded that the challenged claims of the '324 Patent are directed to the abstract idea of "storing and retrieving transaction information through the use of a well-known security feature." Further, we are persuaded by Petitioner's analysis (Pet. 29–38) that additional elements of the claims do not transform the nature of the claims into a patent-eligible application of the abstract idea. On this record, we are persuaded that these computer-related limitations are not meaningful limitations that can salvage these claims and make them patent eligible, and that that these computer-related limitations require nothing more than the routine and conventional use of a computer to receive, retrieve, and communicate information, and the handling of information requests. *See Mayo*, 132 S.Ct. at 1298. To be limited meaningfully, the claim must contain more than mere field-of-use limitations, tangential references to technology, insignificant pre- or post-solution activity, ancillary data-gathering steps, or

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the like. *Id.* at 1297.

As such, we are persuaded that it is more likely than not that claims 1–13 of the '324 Patent are directed to ineligible subject matter under 35 U.S.C. § 101.

D. Anticipation by Bravman Claims 1–13

Petitioner argues that Bravman anticipates claims 1–13. Pet. 40–51.

Bravman is directed to a discloses a traveler security and luggage control system, with a communications network comprising multiple remote stations are connected to a central computer which stores passenger records based on a passenger ID. Ex. 1011, Abs, 2:59–3:2. Fig. 7 of Bravman is reproduced below:

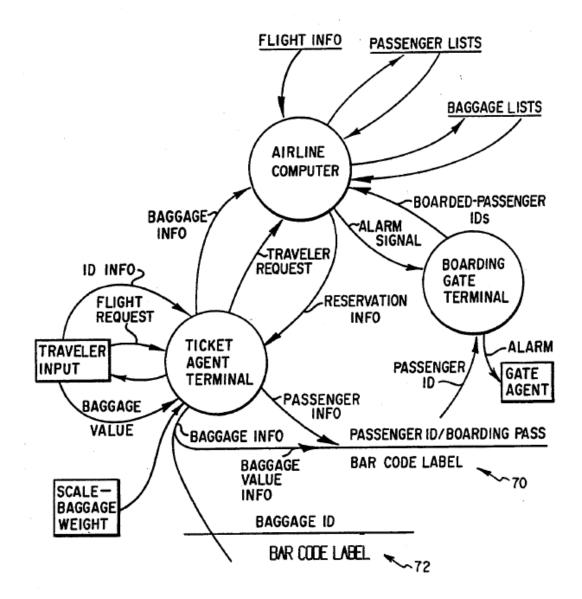


Figure 7 of Bravman above illustrates its system.

The stations print a two-dimensional bar code label for a passenger's luggage and/or boarding pass, where the bar code encodes the passenger ID. *Id.* When the passenger arrives at the gate to board the plane, or at a destination to retrieve his luggage, the bar code is scanned to retrieve the passenger record corresponding to the ID. *Id.*

i. Claims 1–5, 7, 9–11, and 13

Petitioner argues, with respect to claim 1, that Bravman discloses a "database management method" though its disclosure of the traveler data management system. Pet. 41–42 (citing Ex. 1011, 2:59–3:2). Petitioner continues that claim 1's "receiving and storing" step is met through Bravman's disclosure of host computer (10) connected to base stations (12–14), with each base station connected to bar code readers, where a ticketing agent at a base station enters information relating to the traveler's origination and destination points and scheduled departure and arrival times, and produces a bar code. *Id.* at 42–43 (citing Ex. 1011, 4:21–43, 7:28–33, 8:16–18, Fig. 1).

Petitioner also argues that Bravman discloses a "nonpredictable bar code" because Bravman discloses that the passenger identification code may be derived by using a suitable hashing function that takes as inputs one or more of the flight information, the passenger's name or social security number, and the like. *Id.* at 43–44 (citing Ex. 1011, 7:37–41). Petitioner's declarant, Dr. Michael Shamos, testifies that the hashing function in Bravman "outputs a nonpredictable set of digits in the form of the passenger identification code," and that "[o]ne of ordinary skill in the art would understand that the passenger identification code would not be determinable by unauthorized parties." Ex. 1004 ¶ 81. Petitioner also points out that Bravman discloses that the bar codes can be encrypted or include a checksum to make forgery or unauthorized access more difficult. Pet. 44 (citing Ex. 1011, 8:10–14).

Additionally, Petitioner argues that Bravman discloses that when the passenger reaches the boarding gate, the boarding pass is scanned and a

request for transaction information is made to determine whether the boarding pass is authentic, alleged to be equivalent to the "receiving" step of claim 1. Pet. 45 (citing Ex. 1011, 9:4–30). Bravman also discloses that the bar code can be scanned to obtain codes, which can be compared with stored codes, which may be shared with the destination airport or hotel to effectuate luggage delivery. Pet. 45–46 (citing Ex. 1011, 9:19–22, 10:54–68). With respect to claim 9, Petitioner relies upon its anticipation analysis for claim 1. Pet. 50.

We are persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates independent claims 1 and 9, per the analysis provided in the Petition, in view of the testimony of Dr. Michael Shamos (Ex. 1004). Patent Owner argues that Bravman fails to teach or suggest all of the elements of the claims. Prelim. Resp. 22–34. We address the points raised by Patent Owner in turn below.

Patent Owner argues that Petitioner has not shown that Bravman teaches the step of "receiving a request for the transaction information." *Id.* at 23. Patent Owner argues that Petitioner has mischaracterized Bravman, arguing that Bravman does not disclose requesting any information and that the bar code in Bravman directly provides the information and there would be no reason to make a request to the host. *Id.* at 23–25. However, the portion of Bravman cited by Patent Owner (*Id.* at 24 (citing Ex. 1011, 9:19–25)), makes clear that some type of check is performed therein ("[t]he host computer 10 compares those codes 70 with a list of passenger identification codes 70 associated with checked luggage for the flight in question in the computer's data files.") Such a check would need to be initiated so that the comparison can be made, so that some type of request for information is being made. Additionally, with respect to obtaining the information directly from the bar

code, even if such a determination is possible, it does not explain the checking process in the cited section of Bravman.

Patent Owner also argues that Bravman does not disclose a nonpredictable bar code because Bravman does not disclose than an unauthorized party would lack the knowledge to decode. *Id.* at 25–27. Patent Owner continues that the Petition never argues that the unauthorized party actually does not have access to the hash function disclosed in Bravman. *Id.* We do not agree. Without actual knowledge of the specific hash function, it is not clear that any unauthorized party could simply reverse engineer the workings of the function. We credit the testimony of Dr. Michael Shamos, providing that the hashing function in Bravman "outputs a nonpredictable set of digits." Ex. 1004 ¶ 81. It would seem reasonable that only persons authorized would have access to the specific hash function and its parameters, at least within the bounds of our claim construction for "nonpredictable bar code." As such, we do not find Patent Owner's argument to be persuasive.

Additionally, Patent Owner argues that the Petition combines various disclosures from separate embodiments of Bravman. *Id.* at 28–32. Patent Owner argues that a ticketing agent would have no need to scan the bar code that was just printed, doing so only in the alternate embodiment where the bar codes are preprinted, and discusses the scanning of a luggage code (72) at the destination airport and the boarding pass bar code (70) at the departure airport interchangeably although they come from different embodiments. *Id.* Patent Owner's arguments go to the clarity of Petitioner's ground, but do not address the overall disclosure of Bravman. As discussed above, the ticketing agent receives information from the traveler to create a bar code, where that bar code can be scanned subsequently to effectuate luggage delivery. We are

persuaded that this process allows for the receiving and storing of transaction information, with a later request that leads to retrieval and communication of that transaction information. As such, we do not find Patent Owner's argument to be persuasive.

Lastly, Patent Owner argues that Petitioner's analysis of claim 9 is insufficient because it only relies on the analysis of claim 1. *Id.* at 32–34. Patent Owner argues that claim 9 recites a "computer" and a "database," not recited in claim 1, and the analysis is directed to multiple computers and databases. *Id.* at 33. We do not agree. Petitioner's analysis makes clear that it is a host computer associated with an airline in a departure airport (Pet. 43–44) that is the computer that receives the transaction information in claim 9. Although not specific, the applicability of the ground to claim 9 is clear.

With respect to claims 2, 3, and 10, Petitioner argues that "Bravman teaches both, as the host computer 10 (which maintains the database management system (DBMS)) is connected to remote terminals via a communications link, which may be a serial type such as RS-232, or 'alternatively the link 11 may use one or more available local area network (LAN) type of protocols." Pet. 47 (citing Ex. 1011, 5:11-16, Fig. 1). Petitioner asserts that a local area network is both an intranet and an electronic network. *Id.* (citing Ex. 1004 ¶ 149). Patent Owner does not explicitly argue the subject matter of claims 2, 3, and 10. We are persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claims 2, 3, and 10, per the analysis provided in the Petition.

With respect to claim 4, that claim recites, in part, that "the request includes a bar code identifying an item in the transaction, and wherein the step of retrieving includes retrieving transaction information for the item."

Petitioner argues that Bravman discloses that the "item in the transaction" in the particular flight. *Id.* at 47–48. Patent Owner argues that a boarding pass is not a receipt, as it lacks the date of purchase, the price of the flight, the form of payment, or other information commonly associated with a receipt. Prelim. Resp. 34. Patent Owner also faults Petitioner's analysis, arguing that Bravman does not detail that the scanning of the boarding pass determines whether the purchaser is entitled to board that flight. *Id.* at 35–37. We are not persuaded by Patent Owner's arguments. We note that claim 4 does not recite a "receipt," such that the specific requirements of a receipt are not germane. The item identified is the flight, even if the boarding pass cannot be used as a receipt. As well, even if the boarding pass does not detail an entitlement for the purchaser, information on the item in the transaction, the flight, can be retrieved using the bar code. We are persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claim 4, per the analysis provided in the Petition.

With respect to claims 5 and 11, Petitioner argues that Bravman discloses that the passenger identification code becomes an electronic address for this location in the host computer 10 where this information can later be retrieved. Pet. 48 (citing Ex. 1011, 9:4–26; Ex. 1004 ¶ 149). Patent Owner points out that the Specification discloses examples of electronic addresses including a uniform resource locator (URL) or an IP address (Ex. 1011, 6:51–56), and Bravman provides no equivalent disclosure. Although we agree with Patent Owner that the Specification provides those examples, we are not persuaded that an electronic memory address would not be a subset of electronic addresses. The Specification of the '324 Patent provides disclosure that the transaction code can be stored in a record in a database, where the file

may use the nonpredictable code as a content address therein. Although we regard a computer memory address as possibly being transient and different than a nonpredictable bar code, Bravman's electronic *memory* address falls within the scope of the claimed electronic address. As such, we are persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claims 5 and 11, per the analysis provided in the Petition.

With respect to claims 7 and 13, those claims recite that the nonpredictable bar code encodes a pseudorandom sequence. Petitioner argues that a pseudorandom sequence falls within the scope of using a hashing function to generate the nonpredictable passenger identification code. Pet. 49. Patent Owner responds that Petitioner's conclusions lack any factual support and are not supported by evidence. Prelim. Resp. 40. Based on the adopted claim construction for "pseudorandom sequence," we agree with Petitioner that Bravman's hash function can satisfy one or more standard statistical tests for randomness. We are persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claims 7 and 13, per the analysis provided in the Petition.

On this record, we are persuaded that Petitioner has demonstrated that claims 1–5, 7, 9–11, and 13 are more likely than not anticipated under 35 U.S.C. § 102 by Bravman.

ii. Claims 6, 8, and 12

With respect to claims 6 and 12, Petitioner argues that Bravman details that "the bar code label 70 may include the nonpredictable passenger ID, as well as "predictable" information, such as the passenger's name, address, seat assignment, etc." Pet. 49 (citing Ex. 1011, 7:53–56). As Patent Owner points out, claims 6 and 12 require that the *electronic address* include a predictable

portion concatenated with a nonpredictable portion, whereas Petitioner discusses the bar code have those portions. Prelim. Resp. 39. We agree with Patent Owner that having a bar code with the requisite portions does not meet the limitations of claims 6 and 12. As such, we are not persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claims 6 and 12, per the analysis provided in the Petition.

Lastly, claim 8 recites a step of storing the transaction data in a file having filename based upon the nonpredictable bar code. Petitioner asserts that the passenger identification code 70 is associated with a passenger ID file 76 and/or a baggage ID file 78 in the database management system in host computer 10, and that those codes are compared when the bar code is later scanned. Pet. 50. However, no cited portion of Bravman discloses a filename or anything equivalent. As such, we are not persuaded that Petitioner has shown that it is more likely than not that Bravman anticipates claim 8, per the analysis provided in the Petition.

On this record, we are not persuaded that Petitioner has demonstrated that claims 6, 8, and 12 are more likely than not anticipated under 35 U.S.C. § 102 by Bravman.

iii. Conclusion

Based on the record and the above discussions, we are persuaded that Petitioner has demonstrated that 1–5, 7, 9–11, and 13 are more likely than not anticipated by Bravman, but not that Petitioner has demonstrated that 6, 8, and 12 are more likely than not anticipated by Bravman

E. Obviousness over Williams and Storch I Claims 1–13

Petitioner asserts that claims 1–13 are obvious over the combination of Williams and Storch I. Pet. 51–65. Patent Owner disputes this ground, arguing that a person of ordinary skill in the art would not have combined the two references to produce the claimed invention, and that the combination fails to show all of the claimed features recited. Prelim. Resp. 42–52.

Williams provides a pharmacy system for automating the medical prescription fulfillment process for a customer. Ex. 1014, Abs. A network of work stations receive data entry from a customer to create a prescription transaction data record (which may include an image of the prescription). *Id.* This record is communicated in the network and stored in a central database that is connected to the work stations. *Id* at 2:32–38. The transaction data record is associated with a bar coded ID, which is printed on the prescription label. *Id.* at 3:25–30. A pharmacist at one of the work stations can scan the bar code to retrieve an image of the prescription record and compare it to the product from the customer before dispensing the prescription. *Id.* at 3:45–63.

Storch I discloses a system for counterfeit detection using ID numbers with at least one random portion. Ex. 1009, Abs. An object (such as a product) has a bar coded ID number printed on its label. *Id.* at 4:44–47. The ID number is linked to a record in a database. *Id.*, Abs. The ID number may include a serial portion (of one or more characters) appended to a random portion (of one or more randomly generated characters). *Id.* at 4:37–43. When an object is presented for purchase, an employee can read the bar coded ID number and compare it to the ID number stored in a database to check for authenticity and detect unauthorized objects with counterfeit ID numbers. *Id.* at 5:18–28.

i. Combination of Williams and Storch I

With respect to the combination of Williams and Storch I, Petitioner argues that one of skill in the art would have been motivated to look for a way to secure prescription numbers, and would look to Storch I as a means of doing so. Pet. 56 (citing Ex. 1004 ¶¶ 152–153). Petitioner also argues that the combination simply arranges "old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement." Pet. 57 (quoting KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 417 (2007)). Additionally, Petitioner argues that the teachings of Williams and Storch I expressly complement one another and would have naturally guided a person of ordinary skill to use nonpredictable bar codes. Pet. 57–58. We are persuaded that Petitioner has shown that it is more likely than not that the combination would have been obvious.

Patent Owner argues that the underpinnings of the combination proffered by Petitioner are not rational. Prelim. Resp. 43. Patent Owner argues that there is no evidence that a person of ordinary skill would have been motivated to look for a way to secure prescription numbers and that Storch I is concerned with counterfeiting, which is different than forgery, upon which Dr. Shamos relies. *Id.* at 43–44 (citing Ex. 1009, 2:45–51; Ex. 1004 ¶ 153). Additionally, Patent Owner argues that the bar codes of Storch I would not perform any function beyond the conventional bar code, already disclosed by Williams. *Id.* at 44–45. As well, Patent Owner argues that the application of bar codes from Storch I after the patient presented the prescription to the pharmacy would have no effect on the ability to detect alterations to that document. *Id.* at 45–46. We do not agree.

We are persuaded that the same rationale for requiring nonpredictability in Patent Owner's disclosure, i.e., to make the information practicably inaccessible by unauthorized parties (Ex. 1001, 4:62–64), would also be applicable to secure prescription numbers. Such a rationale is applicable to both counterfeiting and forgery, since it increase the security and makes both types of fraud more difficult. As well, even though Storch I's bar codes would provide the same functionality, they would provide greater security, as Petitioner asserts. Pet. 56–58. Further, we agree with Petitioner that the combination would arrange old elements with each performing the same function it has been known to perform (*id.* at 57), so that even if the combination "would have no effect on the ability to detect alterations to that document" (Prelim. Resp. 45), the combination would still be an obvious variation.

ii. Claims 1-5, 7, 9-11, and 13

With respect to independent claims 1 and 9, and dependent claims 2–5, 7, 10, 11, and 13, Petitioner argues that Williams in view of Storch I teaches or suggests all of the elements of those claims. Pet. 54–65. Upon review of the cited sections of the Petition and the discussion above, we are persuaded that Petitioner has demonstrated that claims 1–5, 7, 9, 10, 11, and 13 are more likely than not rendered obvious under 35 U.S.C. § 103 over Williams and Storch I. Patent Owner disputes this and we address the alleged deficiencies of the combination below.

Patent Owner argues that Petitioner has failed to demonstrate that claims 2 and 10, which recite that the transaction information is communicated over either the Internet or an intranet. Prelim. Resp. 46–48. Patent Owner disagrees with Petition's assertion Williams's disclosure of

multiple serial data lines 216 constitute the claim intranet. Pet. 60, 65. Patent Owner also argues that the lines are serial data lines, whereas an intranet "usually employs applications associated with the Internet, such as Web pages." Prelim. Resp. 47 (quoting Ex. 2003, 262). We disagree.

The cited definition provides that an intranet "usually" employs specific Internet applications, but we are not persuaded that an intranet should be so limited. Even applying a claim construction standard under *Phillips*, an intranet is by definition a network, but that does not necessarily distinguish the disclosure of Williams. As illustrated in Fig. 1 of Williams, multiple terminals (104, 304) are used in the system, and in the relevant timeframe, it would have been obvious for one of ordinary skill in the art to have envisioned that those terminals were interconnected. As such, we are persuaded that Petitioner has demonstrated the obviousness of claims 2 and 10 over Williams and Storch I.

With respect to claim 3, Patent Owner makes a similar argument that the serial links of Williams connote the connections of peripherals and cannot render obvious the electronic network recited in claim 3. Prelim. Resp. 48. For similar reason as discussed above, we are persuaded that one of ordinary skill in the art to have envisioned that those terminals of Williams as constituting an electronic network.

With respect to claims 5 and 11, Patent Owner argues that Petitioner's mapping of an index to a data record to the claimed "electronic address" is without factual support and is presented without any construction of the claim term. *Id.* at 49. Patent also argues that Petitioner does not explain how the combined system would teach the specific limitations of claims 5 and 11. *Id.* We do not agree. As discussed above, we are persuaded that an electronic

memory address would fall within the scope of "electronic address." Patent Owner has argued how certain examples provided in the Specification are different from an index to a data record, but has not adequately demonstrated that the claimed term "electronic address" must be limited to those examples. Additionally, we are persuaded that one of ordinary skill in the art would have constructed a "nonpredictable bar code [that] encodes an electronic address" based on the teachings of Williams and Storch I.

Patent Owner argues that Petitioner has failed to demonstrate that claims 9 and 13 are obvious because Petitioner has incorporated the prior analysis of claims 1 and 7. Prelim. Resp. 51–52 (citing Pet. 64–65). Patent Owner made a similar argument with respect to the anticipation ground over Bravman, and we are equally unpersuaded by this argument. The analysis of claim 1 clearly delineated a computer and a database, as recited in claim 9, such we have no difficulty applying the same analysis to claims 9 and 13.

On this record, we are persuaded that Petitioner has demonstrated that claims 1–4, 7, 9, 10, and 13 are more likely than not rendered obvious under 35 U.S.C. § 103 over Williams and Storch I.

iii. Claims 6, 8, and 12

With respect to claims 6, 8, and 12, similar to the discussion in Section D.ii above, we are not persuaded that Petitioner has demonstrated the obviousness of those claims. With respect to claims 6 and 12, those claims require that the *electronic address* include a predictable portion concatenated with a nonpredictable portion, but Petitioner has not addressed the electronic address portions of those claims. *See id.* at 62–63. With respect to claim 8, Petitioner asserts that Williams teaches that the transaction data record is stored with a filename (index) based on the bar-coded prescription number.

Id. at 64. However, as discussed above, we are not persuaded that indices in a database and filenames are necessarily the same or that one would suggest the other.

On this record, we are not persuaded that Petitioner has demonstrated that claims 6, 8, and 12 are more likely than not obvious under 35 U.S.C. § 103 over Williams and Storch I.

iii. Conclusion

Based on the record and the above discussions, we are persuaded that Petitioner has demonstrated that 1–5, 7, 9–11, and 13 are more likely than not rendered obvious over Williams and Storch I, but not that Petitioner has demonstrated that 6, 8, and 12 are more likely than not rendered obvious over Williams and Storch I.

F. Obviousness over Beller and Storch I Claims 1–13

Petitioner asserts that claims 1–13 are obvious over the combination of Beller and Storch I. Pet. 65–80. Patent Owner disputes this ground, arguing that the combination fails to show all of the claimed features recited. Prelim. Resp. 52–57.

Beller discloses a bar code scanning and labeling apparatus (which may be a point of sale terminal) for generating a modified bar code dataform. Ex. 1015, Abs. The modified bar code is affixed to a product in a retail location. *Id.* at 4:15–19. The apparatus is connected to a remote database which stores product data related to the bar code dataform. *Id.*, Abs. The point of sale terminal can be used to scan the bar code dataform and retrieve product information from the database. *Id.* at 4:19–29. The modified bar code can encode more data than a traditional bar code, including the sale price

for the item, the date the item was purchased, shipping information, and other data. *Id.* at 6:29–7:10.

i. Combination of Beller and Storch I

With respect to the combination of Beller and Storch I, Petitioner argues that one of skill in the art would have been motivated to look for a way to prevent forged product identification keys, and would look to Storch I as a means of doing so. Pet. 69 (citing Ex. 1004 ¶ 159). Petitioner also argues that the combination simply arranges "old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement." Pet. 70 (quoting *KSR*, 550 U.S. at 417). Additionally, Petitioner argues that the teachings of Beller and Storch I expressly complement one another and would have naturally guided a person of ordinary skill to use nonpredictable bar codes. Pet. 71. We are persuaded that Petitioner has shown that it is more likely than not that the combination would have been obvious.

ii. Claims 1–5, 7, 9–11, and 13

With respect to independent claims 1 and 9, and dependent claims 2–5, 7, 10, 11, and 13, Petitioner argues that Beller in view of Storch I teaches or suggests all of the elements of those claims. Pet. 65–80. Upon review of the cited sections of the Petition, we are persuaded that Petitioner has demonstrated that claims 1–5, 7, 9–11, and 13 are more likely than not rendered obvious under 35 U.S.C. § 103 over Beller and Storch I. Patent Owner disputes this and we address the alleged deficiencies of the combination below.

With respect to claim 1, Patent Owner argues that the combination fails to teach or suggest "the transaction information generated by a transaction

terminal," as recited in that claim. Prelim. Resp. 53–54. Patent Owner continues that Petitioner relies on Beller's file containing a product's price, stock number and description as the claimed transaction information (Pet. 68), but that product information, generated by a manufacturer, is not generated by the transaction terminal. Prelim. Resp. 53.

We disagree with Patent Owner's reading of the claim. Claim 1 specifies that "the transaction information [is] generated by a transaction terminal," but there is no other recitation of the transaction terminal. In view of Beller and Storch I, a manufacturer's computer, that generates the original file, would be the transaction terminal of claim 1, but the steps of claim 1 would be performed by the point of sale terminal. As such, we are persuaded that Beller and Storch I teach or suggest this element of claim 1.

With respect to claims 5 and 11, Patent Owner points to a portion of Beller stating that "[t]he product identification key [converted or decoded from the scanned image] is not itself a record address for a file but rather is converted into a record address by a mathematical algorithm." Prelim. Resp. 54 (quoting Ex. 1015, 3:27–30). Based on this, Patent Owner argues that Beller's bar codes encodes a number which is not an address. We do not agree. Claim 5 recites that "the nonpredictable bar code encodes an electronic address," with a similar recitation found in claim 11. Patent Owner's argument assumes that "encode" must be *directly* encoded, whereby we are persuaded that an intermediate step does not mean that the information is encoded. In other words, if an address is converted to another form, and the resulting form is encoded into a bar code, we are persuaded that the address is still encoded. As such, we are persuaded that Beller and Storch I teach or suggest the elements of claims 5 and 11.

With respect to claims 9, 10, and 13, Patent Owner argues that Petitioner has failed to demonstrate that claims 9, 10, and 13 are obvious because Petitioner has incorporated the prior analysis of claims 1, 2, and 7. Prelim. Resp. 56–57 (citing Pet. 79–80). Patent Owner made a similar argument with respect to the previously considered grounds, and we are equally unpersuaded by this argument. The analysis of claim 1 clearly delineated a computer and a database, as recited in claim 9, such we have no difficulty applying the same analysis to claims 9, 10, and 13.

On this record, we are persuaded that Petitioner has demonstrated that claims 1–5, 7, 9–11, and 13 are more likely than not rendered obvious under 35 U.S.C. § 103 over Beller and Storch I.

iii. Claims 6, 8, and 12

With respect to claims 6, 8, and 12, similar to the discussion in Sections D.ii and E.iii above, we are not persuaded that Petitioner has demonstrated the obviousness of those claims. With respect to claims 6 and 12, those claims require that the *electronic address* include a predictable portion concatenated with a nonpredictable portion, but Petitioner has not addressed the electronic address portions of those claims. *See id.* at 76–78. With respect to claim 8, Petitioner asserts that Beller teaches that the transaction data are stored in a file which is associated with the product identification key that points to the record address for the data file. *Id.* at 78–79. However, as discussed above, we are not persuaded that indices in a database and filenames are necessarily the same or that one would suggest the other.

On this record, we are not persuaded that Petitioner has demonstrated that claims 6, 8, and 12 are more likely than not obvious under 35 U.S.C. § 103 over Beller and Storch I.

iii. Conclusion

Based on the record and the above discussions, we are persuaded that Petitioner has demonstrated that 1–5, 7, 9–11, and 13 are more likely than not rendered obvious over Beller and Storch I, but not that Petitioner has demonstrated that 6, 8, and 12 are more likely than not rendered obvious over Beller and Storch I.

G. Conclusion

The Petition demonstrates that it is more likely than not that challenged claims are unpatentable on the following grounds:

Ground	Prior Art	Challenged Claims
§ 101		1–13
§ 102	Bravman	1–5, 7, 9–11, and 13
§ 103	Williams and Storch I	1–5, 7, 9–11, and 13
§ 103	Beller and Storch I	1–5, 7, 9–11, and 13

The Board has not yet made a final determination as to the patentability of any claim.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 324(a), a covered business method patent review is hereby instituted as to claims 1–13 of the '324 Patent as indicated above.

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(d) and

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37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial commencing on the entry date of this Order.

CBM2016-00029 Patent 5,969,324

PETITIONER:

Robert C. Hilton
Jason W. Cook
MCGUIREWOODS LLP
rhilton@mcguirewoods.com
jcook@mcguirewoods.com
sallybeauty-iv@mcguirewoods.com

PATENT OWNER:

Byron L. Pickard Lori A. Gordon STERNE, KESSLER, GOLDSTEIN FOX P.L.L.C. bpickard-PTAB@skgf.com Lgordon-PTAB@skgf.com

Donald J. Coulman
Tim R. Seeley
INTELLECTUAL VENTURES
dcoulman@intven.com
tim@intven.com