UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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INFORMATICA CORPORATION,
Petitioner,

v.

PROTEGRITY CORPORATION,
Patent Owner.
_____

CBM2015-00010
Patent 8,402,281 B2

Before KEVIN F. TURNER, MEREDITH C. PETRAVICK, and
GREGG I. ANDERSON, *Administrative Patent Judges.*

PETRAVICK, *Administrative Patent Judge.*

DECISION
Institution of Covered Business Method Patent Review
37 C.F.R. § 42.308

I. INTRODUCTION

A. Background

On October 14, 2014, Informatica Corporation ("Petitioner") filed a
Petition (Paper 1, "Pet.") requesting a review under the transitional program
for covered business method patents of U.S. Patent No. 8,402,281 B2 (Ex.
1001, "the '281 patent"). On February 13, 2015, Protegrity Corporation

("Patent Owner") filed a Preliminary Response (Paper 6, "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 1–60 ("the challenged
claims") of the '281 patent under 35 U.S.C. §§ 101, 102, and 103. Taking
into account Patent Owner's Preliminary Response, 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 '281 patent.

B. Related Matters

Petitioner identifies *Protegrity Corporation v. Informatica
Corporation*, No. 3:14-cv-02588 (N.D. Cal.) as a related district court
proceeding. Pet. 8; Paper 4, 3. Patent Owner identifies numerous other
related district court matters that would be affected by a decision in this
proceeding. *See* Paper 4, 3–5.

The '281 patent was the subject of terminated proceedings CBM2014-
00024 and CBM2014-00121. Those proceedings terminated due to
settlement between the parties. The '281 patent is also the subject of
pending proceedings CBM2015-00006 and CBM2014-00182.

The '281 patent is a continuation of U.S. Patent No. 6,321,201 B1 (Ex. 1009, "the '201 patent"). The '201 patent is the subject of pending proceedings CBM2015-00002, CBM2015-00014, and CBM2015-00030. The '201 patent was also the subject of Reexamination No. 90/011,364, with some originally issued claims confirmed, some cancelled, one claim amended, and several claims added.

C. The '281 Patent

The '281 patent, titled "Data Security System for a Database," issued on March 19, 2013, based on Application No. 12/916,274, filed on October 29, 2010. Ex. 1001, 1. The '281 patent claims priority through a chain of continuation applications to the '201 patent, filed on June 18, 1997. *Id*.

The '281 patent is concerned with protecting data against unauthorized access. *Id*. at col. 2, ll. 30–33. The '281 patent states that "in . . . fields, such as industry, defen[s]e, banking, insurance, etc[.], improved protection is desired against unauthori[z]ed access to the tools, databases, applications[,] etc.[,] that are used for administration and storing of sensitive information." *Id*. at col. 1, ll. 35–39. Figure 4 is reproduced below.
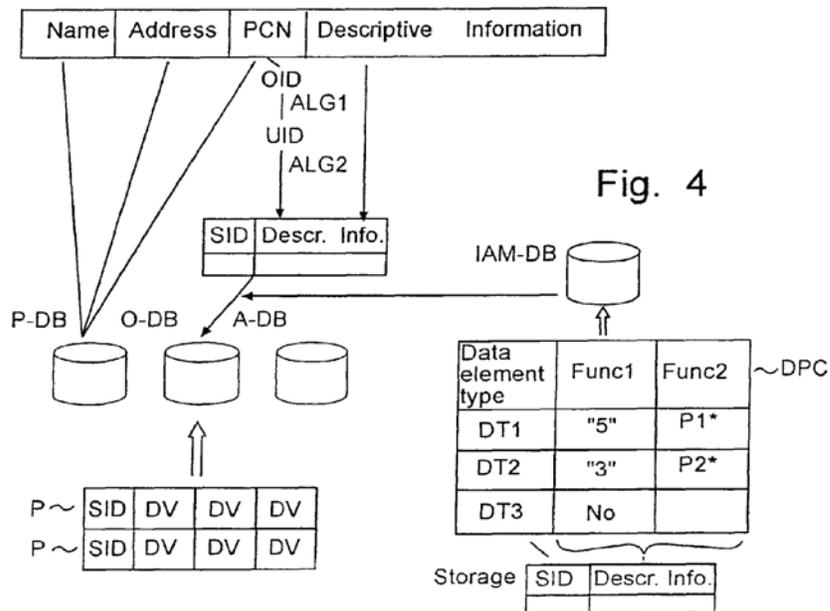
Fig. 4

Figure 4 depicts the '281 patent's system

The system shown in Figure 4 includes an operative database (O-DB) and another database, IAM-DB. O-DB database contains data element values DV that are to be protected. *Id.* at col. 5, ll. 62–67. IAM-DB database contains a data protection catalogue (DPC), which stores protection attributes (e.g., P1*) for data element types (e.g., DT1) that are associated with data element values DV. *Id.* at col. 6, ll. 6–11. The protection attributes state rules for processing the corresponding data element values DV. *Id.* at col. 3, ll. 58–59. For example, a protection attribute indicates the degree to which data element value DV is encrypted (*id.* at col. 7, l. 66–col. 8, l. 3) or indicates that only accepted, or certified, programs are allowed to process data element value DV (*id.* at col. 9, ll. 26–33). *See id.* at col. 4, l. 51–col. 5, l. 6. When a user initiates an attempt to process a certain data element value DV, a compelling calling is created to data protection catalogue DPC to obtain the protection attributes associated with the data element type for data element value DV. *Id.* at col. 2, l. 65–col. 3, l. 4. The

processing of data element value DV is then controlled in conformity with the protection attributes. *Id.* at col. 3, ll. 3–5; *see id.* at col. 3, l. 61–col. 4, l. 6. Thus, the individual data element or data element type becomes the controlling unit for determining the level of protection. *Id.* at col. 4, ll. 42–47.

Claims 1 and 33 of the '281 patent are illustrative of the claims at issue and read as follows:

> 1.   A computer-implemented data processing method comprising:
>
>   maintaining a database comprising a plurality of data portions;
>
>   maintaining a separate data protection table comprising, for each of one or more data portions, a plurality of data processing rules associated with the data portion that must each be satisfied before the data portion can be accessed;
>
>   receiving a request to access a data portion;
>
>   determining whether each of the one or more data processing rules associated with the requested data portion are satisfied; and
>
>   granting access to the requested data portion responsive to each of the one or more data processing rules associated with the requested data portion being satisfied.

> 33.   A computer-implemented data processing method comprising:
>
>   maintaining a database comprising a plurality of data portions, each data portion associated with a data category;
>
>   maintaining a separate data protection table comprising, for at least one data category, one or more data processing rules associated with the data category that must each be satisfied before a data portion associated with the data category can be accessed;

receiving a request to access a data portion associated with a first data category from a user;

determining whether each of the one or more data processing rules associated with the requested data portion are satisfied; and

granting the user access to the requested data portion responsive to each of the retrieved one or more data processing rules being satisfied.

D. The Alleged Grounds of Unpatentability

Petitioner sets forth grounds of unpatentability of the challenged claims as follows:

Ground	Prior Art	Challenged Claims
§ 101	n/a	1–60
§ 102	Denning[1]	1–6, 9, 10, 12–22, 25, 26, 28–38, 43–52, 55, and 57–60
§ 103	Denning and FIPS PUB 140-1[2]	7, 8, 12–14, 16, 23, 24, 28–30, 32, 39, 40, 43–46, 53, 54, and 57–60
§ 103	Denning and Shear[3]	11, 27, 42, and 56

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[1] DOROTHY ELIZABETH ROBLING DENNING, CRYPTOGRAPHY AND DATA SECURITY, 1–400 (1982) (Ex. 1006) ("Denning").

[2] U.S. DEPT. OF COMM., NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION: SECURITY REQUIREMENTS FOR CRYPTOGRAPHIC MODULES FIPS-PUB 140-1, 1–48 (Jan. 11, 1994) (retrieved from: http://csrc.nist.gov/publications/fips/fips1401.htm) (last visited Aug. 16, 2010) (Ex. 1007) ("FIPS PUB 140-1").

[3] U.S. Patent No. 5,050,213 (issued Sept. 17, 1991) (Ex. 1008).

II. ANALYSIS

A. 35 U.S.C. § 325(d)

Patent Owner requests that we exercise our discretion under 35 U.S.C. § 325(d) to deny the Petition because it relies upon prior art and arguments that are the same or substantially the same as considered during the prosecution of the '281 patent, the reexamination of the '201 patent, and CBM2014-00024. Prelim. Resp. 42–48.

35 U.S.C. § 325(d) states: "In 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."

The '281 patent cites to four articles authored by Dorothy E. Denning (Exs. 2010, 2026–2028), the same author who authored the Denning reference asserted in this proceeding (Ex. 1006). *See* Ex. 1001, 4–5. Upon review of these articles and the prosecution history of the '281 patent (Ex. 1012), we are not persuaded by Patent Owner (*see* Prelim. Resp. 43–44) that Denning (Ex. 1006) is the same or substantially the same as these articles, or that the Petition presents the same or substantially same arguments made during the prosecution of the '281 patent in relation to these articles.

The '201 patent, which is the parent of the '281 patent, was the subject of Reexamination No. 90/011,364, which was based partly upon the articles authored by Dorothy E. Denning (Ex. 2010, 2026–2028); an article by Khamis A. Omar and David L. Wells (Ex. 2003); an article by George I. Davida et al. (Ex. 2006); and U.S. Patent No. 4,827,508, which is a parent application of Shear. *See* Ex. 2004. Upon review of these documents and the prosecution history of the reexamination of the '201 patent, we are not

persuaded by Patent Owner (*see* Prelim. Resp. 7–10, 44–46) that Denning is the same or substantially the same as these articles, or that the Petition presents the same or substantially the same arguments made during the prosecution of the '201 patent in relation to these articles. The claims of the '281 patent are not the same as the claims at issue in the reexamination of the '201 patent. *See* Ex. 1009.

Covered business method patent review was instituted in CBM2014-00024 based upon Denning and FIPS PUB 140-1—the same prior art as in this proceeding—based upon substantially similar arguments. *See Voltage Security, Inc. v. Protegrity Corp.*, Case CBM2014-00024, Paper 11 (PTAB Apr. 15, 2014). CBM2014-00024, however, was filed by Voltage Security, Incorporated—which is not a Petitioner in this proceeding—and terminated early in the proceeding because Voltage Security, Incorporated and Patent Owner entered into a settlement agreement. *See Voltage Security, Inc. v. Protegrity Corp.*, Case CBM2014-00024, Paper 17 (PTAB May 1, 2014). The Board did not issue a final written decision in CBM2014-00024.

For these reasons, we decline to exercise our discretion under 35 U.S.C. § 325(d) to deny the Petition.

B. Standing to Seek Covered Business Method Patent Review

Section 18 of the AIA[4] 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." AIA § 18(a)(1)(B). 37 C.F.R. § 42.302 states "[c]harged with infringement means a real and

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[4] 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 a petitioner would have standing to bring a declaratory judgment in Federal court."

Petitioner and Patent Owner dispute whether Petitioner's previously filed action for declaratory judgment of non-infringement and invalidity of the '281 patent bars this proceeding. Pet. 7–12[5]; Prelim. Resp. 14–15. Petitioner argues that because its previously filed declaratory judgment action was dismissed without prejudice the proceeding is not barred. Pet. 8–10.

A party may not petition for post-grant review if it has filed a civil action challenging the validity of a claim of the patent before the petition is filed. 35 U.S.C. § 325(a)(1); 37 C.F.R. § 42.201(a); *see Securebuy, LLC v. CardinalCommerce Corp.,* Case CBM2014-00035, slip op. at _3_ (PTAB Apr. 25, 2014) (Paper 12, precedential) (explaining that 35 U.S.C. § 325(a)(1) applies to covered business method patent review proceedings). The Board, however, has determined that dismissal without prejudice does not trigger the statutory bar. *See Cyanotech Corp. v. Bd. of Trustees of the Univ. of Ill.*, Case IPR2013-00401, slip op. at 11–12 (PTAB Dec. 19, 2013) (Paper 17) ("Excluding an action that de jure never existed from the scope of § 315(a)(1) is consistent with both relevant case law and legislative history."); *see also Callidus Software, Inc. v. Versata Software, Inc.,* Case CBM2013-00052 , slip op. at 5–7__ (PTAB Mar. 4, 2014) (Paper 21).

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[5] On May 4, 2015, Petitioner, via email, informed the Board of a clerical typographical error on page 11 of the Petition. The sentence starting with "[i]n the prior cases, petitioner was sued . . ." should be read as "[i]n the prior cases, petitioner was *not* sued . . . ."

(explaining that *Cyanotech Corp.* also applies to covered business method patent review).

Petitioner's previously filed action for declaratory judgment of non-infringement and invalidity of the '281 patent does not bar this proceeding, because the previously filed civil action was dismissed without prejudice. *See* Ex. 1005.

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 (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 '281 patent claims a method for performing data processing, including to protect against unauthorized access of data, such as in banking, that is at least incidental to the "practice, administration, or management of a financial product or service." Pet. 4–5. To support its

argument, Petitioner states that claim 1's "data processing rules" are described in the Specification as protecting against unauthorized access to data portions in a database, and that the Specification discloses that such protection against unauthorized access is used in the field of banking. *Id*. at 5.

Patent Owner argues that "[t]he claims of the [']281 [p]atent do not encompass activities that are 'financial in nature, incidental to a financial activity or complementary to a financial activity.'" Prelim. Resp. 16 (citing 77 Fed. Reg. at 48,374–35). To support its argument, Patent Owner states that Petitioner does not cite to "any single word in any single claim" that is directed to a financial product of service, none of the prior art cited by Petitioner is directed to a financial product or service, and Petitioner does not cite any examples of actual financial products that employ the method of the claims. *Id*. at 16–20.

We are persuaded by Petitioner that at least claim 1 claims a method for performing data processing or other operations that are at least incidental or complementary to the practice, administration, or management of a financial product or service. Claim 1 recites "determining whether each of the one or more data processing rules associated with [a] requested data portion are satisfied." The Specification discloses that protection attributes (i.e., the claimed data processing rules) are used to protect against unauthorized access of a data portion in a database (*see* Ex. 1001, col. 4, ll. 35–47) and that banking is a field where protection against unauthorized access to databases that are used for administering and storing sensitive information is desired. *Id*. at col. 1, ll. 35–39; *see also id*. at Fig. 5, col. 11, ll. 9–15 (describing an example where "Social Allowance" and "Housing

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Allowance" are the protected data and "Financial manager" is an authorized user). Banking is a financial activity.

Upon this record, we determine that Petitioner establishes that at least claim 1 recites 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.

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). 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 '281 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, and because none of the claims

solves a technical problem using a technical solution. Pet. 6. According to Petitioner, none of the claims recites any technology beyond generic computer components. *Id.* at 7.

Patent Owner argues that the '281 patent is for a technological invention, because the claims solve a technical problem with a technical solution. Prelim. Resp. 20–25. According to Patent Owner, the technical problem is "the incomplete data protection in a database that was provided by prior art protection methods and systems, such as "'shell protections,' under which data 'can often . . . relatively easily be subjected to unauthorized access.'" *Id*. at 22 (citing Ex. 1001, col. 2, ll. 10–25). According to Patent Owner, the technical solution is "(i) associating each data element type with one or more protection attributes 'which are stored in a separate data element protection catalogue' and (ii) making compelling calls to the data element protection catalogue when data is requested." *Id*. (citing Ex. 1001, col. 3, l. 52–col. 4, l. 44). Patent Owner argues that this solution has the technical advantage of allowing for encryption at the field level in a database. *Id*. at 19–21.

Patent Owner also argues that the '281 patent is for a technological invention, because the claims recite technological features that were novel and unobvious over the prior art at the time of the invention. *Id*. at 21–22. According to Patent Owner, the technological features are "an unconventional data protection table," "a specific association between data processing rules and data portions or data categories," and "a specially configured processor." *Id.*

We are persuaded by Petitioner that the '281 patent is not for a technological invention because at least claim 1 does not recite a

technological feature that is novel or unobvious over the prior art. Claim 1 recites a data processing method that is "computer-implemented" and includes "maintaining a database." Data processing computers having databases, which store the data, were known at the time of filing the '281 patent. *See* Ex. 1001, col. 1, ll. 28–33. Therefore, we find that at least claim 1 does not recite a technological feature that is novel or unobvious over the prior art.

We also are persuaded that claim 1 does not solve a technical problem using a technical solution. The '281 patent solves the problem of protecting data against unauthorized access. *See e.g.,* Ex. 1001, col. 2, ll. 29–33. Claim 1 recites a data processing method that grants access to data only if associated rules are satisfied. The method is computer implemented and recites maintaining a database of data and separate data protection table having the rules. Contrary to Patent Owner's argument, claim 1 does not require data element types or encryption elements. Data processing computers having databases, which store data, were known at the time of filing the '281 patent. *See id.* at col. 1, ll. 28–33. Thus, at least claim 1 does not solve a technical problem using a technical solution.

For the reasons discussed above, we are persuaded by Petitioner that the '281 patent is eligible for covered business method patent review.

C. Claim Construction

The Board interprets claims of unexpired patents using the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.300(b). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary

meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

i. *"data processing rule"*

Petitioner proposes that the broadest reasonable construction of "data processing rules" is "rules for processing data." Pet. 14. Petitioner further proposes that "processing" should be construed to include, but is not limited to, reading, printing, altering, moving, or copying the data. *Id.* Petitioner argues that its proposed construction is consistent with the Specification, which describes processing as any "'form of reading, printing, altering, coding, moving, copying, etc.'" *Id.* (citing Ex. 1001, col. 3, ll. 8–11).

Patent Owner argues that Petitioner's proposed construction is unreasonably broad and proposes that the appropriate construction is "non-user-based data processing rules for protection of data element values in a database." Prelim. Resp. 49–50. According to Patent Owner, Petitioner's proposed construction is unreasonably broad because "a primary concern of the [']281 [p]atent is to protect data that is to be protected by requiring that certain processing rules (i.e.[,] how to decrypt it, what key to use, etc.) be satisfied before the protected data (i.e.[,] the unencrypted data) can be processed (i.e.[,] read, printed, etc.)." *Id.* at 50.

Upon review of Petitioner's evidence and analysis, we are persuaded that the broadest reasonable construction of "data processing rules" is "rules for processing data." Petitioner's proposed construction is consistent with the Specification, which not only describes processing rules which relate to

encryption (*see, e.g.*, Ex. 1001, col. 7, l. 63–col. 8, l. 3 (describing a protection attribute that indicates the degree of encryption used in generating a data element value); claim 2 ("the data processing rules restrict access to an associated data portion to a specified user")), but also describes processing rules which relate to user-based conditions for accessing the data portion (*see, e.g.*, *id*. at col. 9, ll. 26–33 (describing a "protected programs" rule that restricts access to only accepted or certified programs)). Petitioner's proposed construction, further, is consistent with the dependent claims, which define the data processing rules not only as relating to encryption (*see, e.g.,* dependent claims 7 and 10–12), but also as rules related to which user access the data (*see, e.g.,* dependent claim 2).

Patent Owner's proposed construction is overly narrow and attempts to import limitations, such as the rules being non-user based and for protection of data element values, from the specification (*see* Ex. 1001, col. 3, ll. 52–59) into the claim. Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily) (internal quotations and citation omitted). We see nothing in the claims that requires the data processing rule to be non-user based or to be specifically for protection of data element values. Further, Patent Owner's proposed construction is inconsistent with the claims *themselves*, which do not require that the data portion be data element values. *See, e.g.,* dependent claim 5 (defining the data portion as a column of data in the database).

Upon this record and for the purposes of this decision, we determine that the broadest reasonable construction of data processing rules in light of the specification is "rules for processing data."

ii. "data portion"

Patent Owner argues that the appropriate construction of "data portion" is "a data element value or a cell." Prelim. Resp. 52. Petitioner proposes no construction for "data portion," but argues that the claim term should be given its plain and ordinary meaning. Pet. 13.

Patent Owner's proposed construction is again overly narrow and attempts to import the limitations from the Specification into the claim. Although the Specification describes the invention as working on the cell or data element level (*see* Ex. 1001, col. 3, ll. 52–59), we see nothing in the claims *themselves* that requires the data portions to be data element values or cells. Further, dependent claims 5 and 6 define the claimed data portions to be "a column of data in the database" and "a field of data in the database." Patent Owner's proposed construction is inconsistent with these claims.

The Specification contains no lexicographic definition of "data portion" and, therefore, we shall give "data portion" its ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 908 (10th ed. 1998) defines "portion" as "an individual's part or share of something." Ex. 3001. The claims recite that the data portions are part of a database. *See, e.g.,* Ex. 1001, col. 11, ll. 18–19 (reciting "maintaining a database comprising a plurality of data portions"). Given this, we determine that the broadest reasonable

construction of "data portion," in light of the Specification, is a part or share of the database.

iii. "data category"

Petitioner proposes that the broadest reasonable construction of data category is "any class or division of data sharing one or more characteristics or attributes." Pet. 15–16. Patent Owner proposes no construction for "data category." Prelim. Resp. 51. Upon this record and for the purposes of this decision, we determine that the broadest reasonable construction of data category is any class or division of data sharing one or more characteristics or attributes.

iv. Other Proposed Constructions

Both Petitioner and Patent Owner propose constructions for various other claim terms. *See* Pet. 13–18; Prelim. Resp. 45–54. Based on our review of the record before us, however, no explicit construction of any other claim term is needed at this time.

D. 35 U.S.C. § 101

i. Availability of § 101

As an initial matter, Patent Owner argues that § 101 is not available to challenge patentability in a covered business method patent review, because it is not included in 35 U.S.C. § 282(b)(2) or (3). Prelim. Resp. 42.

We disagree. Under the AIA, any ground that could be raised under §§ 282(b)(2) or (3) can be raised in a post-grant review or (with exceptions not relevant here) in a covered business method patent review. The final rules implementing post-grant review and covered business method patent review in the Federal Register state that the "grounds available for post-grant

review include 35 U.S.C. [§§] 101 and 112, with the exception of compliance with the best mode requirement." 77 Fed. Reg. 48,680, 48,682 (Aug. 14, 2012). This interpretation is consistent with both the relevant case law and the legislative history. *See, e.g.*, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1305 (2012) (addressing invalidity under § 101 when it was raised as a defense to an infringement claim); *Graham v. Deere*, 383 U.S. 1, 12 (1966) (stating that the 1952 Patent Act "sets out the conditions of patentability in three sections," citing 35 U.S.C. §§ 101, 102, and 103); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1330 n.3 (Fed. Cir. 2012); H.R. Rep. No.112-98, at 47 (2011); 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011). Thus, § 101 is a proper ground for a review under the transitional program for covered business method patents.

ii. Section 101 Subject Matter Eligiblity

For claimed subject matter to be patent-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*, 561 U.S. 596, 601 (2010) (internal quotations and 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*, 132 S. Ct. at 1293–94. 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. The first step in

the analysis is to "determine whether the claims at issue are directed to one

of those patent-ineligible concepts." *Id*. 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*. (quoting *Mayo*, 132 S. Ct. at 1297–99. 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*, 561 U.S. at 610–611 (quoting *Diamond v. Diehr*, 450 U.S.

175, 191–92 (1981)).

Accordingly, utilizing this framework, we review Petitioner's

allegation that claims 1–60 of the '281 patent are directed to ineligible

subject matter.

iii. Statutory Category

Claims 1–16 and 33–46 recite data processing methods, and claims

17–32 and 47–60 recite corresponding computer systems. These claimed

methods and system nominally fall within the process and machine categories, respectively, of statutory subject matter.

iv. Ineligible Concept

Petitioner argues that the claims of the '281 patent are directed merely to an abstract idea of determining whether access to data should be granted based on whether one or more rules are satisfied. Pet. 19–20. Patent Owner argues Petitioner fails to provide sufficient analysis and evidence that the claims are directed to such an abstract idea. Prelim. Resp. 29–34.

Upon review of the Petitioner's evidence and analysis and taking into account Patent Owner's Preliminary Response, we are persuaded that the claims of the '281 patent are directed to the abstract idea of determining whether access to data in a database should be granted based on whether one or more rules are satisfied.

v. Inventive Concept

a. Independent Claims 1, 17, 33, and 47

According to Petitioner, "the claims of the '281 [p]atent fail to add sufficiently meaningful limitations that restrict the claimed subject matter beyond an abstract idea." Pet. 20. Petitioner argues that the steps of maintaining a database of data portions; maintaining a separate data protection table; receiving a request to access a data portion; and granting access to a data portion are "merely pre- or post-processing steps" that add nothing meaningful to the claims. *Id.* Petitioner argues that independent claims 17, 33, and 47 are likewise patent-ineligible. *Id.* at 21.

Patent Owner argues that these claims are limited meaningfully to a particular practical application, which does not preempt all uses of the abstract idea. Prelim. Resp. 34–42. Patent Owner argues that the claims

recite "highly specific steps and sub-steps" that require specific programming of the system computer, and therefore, the claims do not preempt all use of the abstract idea. *Id.* at 35–36. In particular, Patent Owner points to the requirement that the database containing data portions is separate from the database containing the data protection table having the data processing rules. *Id.*

Claims 1 and 33 recite similar data processing methods that are computer-implemented, and that include the use of a database having data portions and a separate database containing associated data processing rules. Claims 17 and 47 recite computer systems, which correspond to the methods of claims 1 and 33, respectively. Claims 17 and 47 recite that the system includes the two separate databases and a processor.

On this record, we are persuaded that these computer-related limitations are not meaningful limitations that can salvage these claims to make them patent-eligible, and that these computer-related limitations require nothing more than the routine and conventional use of a computer having a database containing objects, a database containing attributes associated with those objects, and a processor. *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 the like. *Mayo*, 132 S. Ct. at 1297.

Upon review of the Petitioner's evidence and analysis and taking into account Patent Owner's Preliminary Response, we are persuaded by Petitioner that it is more likely than not that claims 1, 17, 33, and 47 are directed to patent-ineligible subject matter under 35 U.S.C. § 101.

b. Dependent Claims 2–16, 18–32, 34–46, and 48–50

Petitioner argues that none of the dependent claims contributes significant limitations to the abstract idea. Pet. 21–22. Patent Owner argues that Petitioner's argument is conclusory and that Petitioner provides insufficient evidence to show that the concepts covered by the dependent claims do not require significantly more than the abstract idea. Prelim. Resp. 38–39. Dependent claims 2–16, 18–32, 34–46, and 48–50 recite limitations that further define the data processing rules (e.g., claims 2–4, 7–14) or further define the data processing rules (e.g., claims 5, 6, 15, and 16).

On this record, we are persuaded that dependent claims 2–16, 18–32, 34–46, and 48–50 are more likely than not patent ineligible under 35 U.S.C. § 101 because, like the independent claims, they do not add significantly more to the abstract idea.

E. Anticipation by Denning

i. Claims 1 and 17

Petitioner argues that Denning's access-matrix model (Ex. 1006, 192–194[6]) anticipates the method of independent claim 1 and the corresponding apparatus of independent claim 17. *See* Pet. 24–30.

Denning is a book titled CRYPTOGRAPHY AND DATA SECURITY and was published in 1982. In Chapter 4, "Access Controls," Denning describes an access-matrix model that is used to control access to objects in a computer operating system. Ex. 1006, 191–192. Denning's Figure 4.1 is reproduced below.

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[6] We refer to the original pagination of Denning.

FIGURE 4.1 Access matrix.

		Objects				
	M1	M2	F1	F2	P1	P2
P1	R W E		Own R W			
P2		R W E		Own R E		

(Subjects label at left)

Figure 4.1 depicts an access-matrix

As shown in Figure 4.1, access-matrix *A* has rows corresponding to subjects *S*, such as users, processes, or domains, and columns corresponding to object *O*, such as files, segments of memory, and processes. *Id.* at 192. "In database systems, the subjects correspond to users and the objects to files, relations, records, or fields within records." *Id.* at 194. "Each entry $A[s, o]$ is a decision rule, specifying the conditions under which user *s* may access data object *o*, and the operations that *s* is permitted to perform on *o*." *Id.* Denning describes that the conditions can be data-independent conditions, such as read or write access rights, but also conditions that are data-dependent, time-dependent, context-dependent, and history-dependent. *Id.* For example, a condition can restrict a user to alter only the content of record where a data field has a certain value, or restrict a user to accessing only certain data fields during a specified time or day. *See id.* Denning describes that a monitor, implemented in software and/or hardware, controls a user's access to the objects based upon whether the associated conditions are satisfied. *See id.* at 193.

Patent Owner argues that Denning's access matrix does not anticipate the claims because "Denning describes a user-based access control system that is unable to provide protection at the data element value or data portion level." Prelim. Resp. 54. Contrary to Patent Owner's argument, Denning

states that, in the access matrix model, "the subjects correspond to users and the objects to files, relations, records, or fields within records." Ex. 1006, 194. Given our construction of "data portion" above, Denning's files, relations, records, or fields within records meet the claimed data portion.

Patent Owner also argues that Denning's conditions or access rights do not meet the claimed data processing rules because "they are user-based, whereas . . . the claimed data processing rules are data element-type based." Prelim. Resp. 60–61. Patent Owner's argument, however, is based upon its proposed construction of "data processing rules," which we do not adopt. As discussed above, we construe "data processing rules" as rules for processing data, and, when given this construction, Denning's decision rules meet this limitation.

Patent Owner further argues that Denning's access matrix model does not meet the claim requirement that each data processing rule associated with the data portion be satisfied before the data portion can be accessed. Prelim. Resp. 61–62. Patent Owner's argument is not commensurate with the scope of the claims. Claim 1 recites "maintaining a separate data protection table comprising, for each of one or more data portions, a plurality of data processing rules associated with the data portion that must each be satisfied before the data portion can be accessed." This limitation does not require that each of *all* of the data processing rules associated with a data portion must be satisfied before the data portion can be accessed, but only each *of a plurality* of data processing rules associated with the data portion.

Upon review of Petitioner's evidence and analysis, and taking into account Patent Owner's argument, we are persuaded that claims 1 and 17 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

ii. Claims 2 and 18

Claim 2 depends from claim 1 and recites: "wherein at least one of the data processing rules restricts access to an associated data portion to a specified user or group of users." Claim 18 depends from claim 17 and recites a similar limitation. Denning describes that the access matrix model's access conditions can restrict a user's access to data, such as in a data field. *See* Ex. 1006, 192–94.

On this record, we are persuaded that claims 2 and 18 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

iii. Claims 3, 4, 19 and 20

Claim 3 depends from claim 1 and recites that "at least one of the data processing rules restricts access to an associated data portion to a specified program or group of programs." Claim 19 depends from claim 17 and recites a similar limitation. Claim 4 depends from claim 3 and further requires that the data processing rules restrict access to a specified version of the program. Claim 20 depends from claim 17 and recites a similar limitation.

To meet these limitations, Petitioner cites Denning's statement that the subjects of access control mechanisms can be users or programs (Pet. 30, 41–42 (citing Ex. 1006, vi)) and argues that:

> It is well known that programs must be specified by naming a specific executable file, which is either allowed or not allowed to access the protected data. Ex. 1010 at ¶68. Every executable file necessarily represents a particular version of a program. *Id*.

Therefore, the administrator who sets up access permissions is obliged to name a particular executable file.

Pet. 31.

On this record, we are persuaded that claims 3, 4, 19, and 20 are more likely than not anticipated by Denning.

iv. Claims 5 and 21

Claim 5 depends from claim 1 and recites that the requested data portion is a column of data in the database. Claim 21 depends from claim 17 and recites a similar limitation.

To meet this limitation, Petitioner cites Denning's description of access rights that are used in the authorization-list type of access control. Pet. 42 (citing Ex. 1006, 2–14). However, the description of the authorization-list type of access control is disparate from Denning's description of the access matrix model. "[T]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.'" *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983). "[I]t is not enough that the prior art reference . . . includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention." *Id.* at 1371. "[D]ifferences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation." *Id.* Denning does not describe using the access matrix model to restrict access to a data portion that is a column of data in a database.

On this record, we are not persuaded that claims 5 and 21 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

v. Claims 6 and 22

Claim 6 depends from claim 1 and recites that the requested data portion comprises a field of data in the database. Claim 22 depends from claim 17 and recites a similar limitation. In describing the access matrix model, Denning states: "the objects [correspond] to files, relations, records, or fields within records." Ex. 1006, 194.

On this record, we are persuaded that claims 6 and 22 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

vi. Claims 9 and 25

Claim 9 depends from claim 1 and recites that "at least one of the data processing rules restricts access to an associated data portion to users or programs that are owners of the subset of data." Claim 25 depends from claim 17 and recites a similar limitation.

Denning describes that a process owning a file can change its rights to a file, such as removing write-access rights. Ex. 1006, 197. Denning also depicts an ownership access right (*OWN*) in the access-matrix depicted in Figure. 4.1. *Id*. at 193.

On this record, we are persuaded that claims 9 and 25 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

vii. Claims 10 and 26

Claim 10 depends from claim 1 and recites that "at least one of the data processing rules specifies a time and method of removal for the data portion, and wherein access to the data portion is restricted based on the specified time and method of removal." Claim 26 depends from claim 17 and recites a similar limitation.

Petitioner cites to Denning's discussion of decision rules to meet this limitation. Pet. 36–37, 44 (citing Ex. 1006, 194). Patent Owner argues that although Denning describes a decision rule that is time-dependent, it does not describe that the time-dependent decision rule specifies a method of removal for the data portion. Prelim. Resp. 66–67.

We are persuaded by Patent Owner that Denning does not describe a time-dependent decision rule that specifies a method for removal for a portion of data. *See* Ex. 1006, 194. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

On this record, we are not persuaded that claims 10 and 26 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

viii. Claims 12–14, 16, 28–30, and 32

Claims 12–14 and 16 depend from claim 1. Claim 12 recites that the requested data portion is encrypted with a first cryptographic key and that the associated data processing rules restrict access to the requested data portion to users or programs that possess the key. Claims 13 and 14 also require that requested data portions be encrypted with a cryptographic key. Claim 16 recites that the data portion comprises encrypted data. Claims 28–30 and 32 recites similar limitations, but depend from claim 17.

To meet these limitations, Petitioner cites to portions of Denning that discuss the access matrix model and portions that discuss the use of encryption in conjunction with the Hoffman formulary model, authorization list model, and other cryptographic methods. *See* Pet. 44–50. According to Petitioner, these portions of Denning describe using encryption with the

access matrix model so as to anticipate these claims, because Denning states that network security requires a combination of encryption and other security controls, including access controls. *Id*. at 45 (citing Ex. 1006, 206).

Patent Owner argues that Petitioner is improperly combining disparate portions of Denning, and that Denning does not describe using the access matrix model with encryption so as to anticipate these claims. Prelim. Resp. 62–64.

We are persuaded by Patent Owner that Denning does not anticipate these claims. In order to anticipate, a document must not only describe all of the elements of the claim, but must describe the elements as arranged in the claim. As discussed above, "it is not enough that the prior art reference . . . includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention." *Net MoneyIN,* 545 F.3d at 1371. "[D]ifferences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation." *Id.* The cited portions of Denning do not describe using the access matrix model in combination with encryption so as to anticipate these claims.

On this record, we are not persuaded that claims 12–14, 16, 28–30, and 32 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

ix. Claims 15 and 31

Claim 15 depends from claim 1 and recites that "each of the plurality of data portions within the database is associated with a different data type." Claim 31 recites a similar limitation and depends from claim 17.

Petitioner argues that a data type is equivalent to a data category and argues that in Denning each of the plurality of data portions within the

database is associated with a different data category. Pet. 26–28. According to Petitioner, a data category can be a column, which is an object that is controlled by Denning's access matrix. *See id.* at 27. Thus, Petitioner equates the data categories to the objects at the heading of the columns of Denning's access matrix. *Id.* Patent Owner argues that the columns of Denning's access matrix model do not correspond to data types but to the data objects themselves, such as M1, M2. Prelim. Resp. 69.

We agree with Patent Owner. Denning describes that the columns of the access matrix correspond to objects and that "[e]ach object is uniquely identified by a name." Ex. 1006, 192. An object name is not a data type or category. Denning does meet the limitation that each of the plurality of data portions within the database is associated with a different data type

On this record, we are not persuaded that claims 15 and 31 are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

x. Claims 33–38, 43–52, 55, and 57–60

Independent claims 33 and 47 recite that the data protection table includes a data category associated with the data processing rules, which must be satisfied before a data portion associated with the data category can be accessed.

Petitioner argues the columns of Denning's access matrix meet the claimed data category. Pet. 28–29, 53, 56–57. For the same reasons as discussed above with respect to claims 15 and 31, we determine that Denning does not disclose the claimed data category associated with the data processing rules.

On this record, we are not persuaded that claims 33 and 47 are more likely than not anticipated under 35 U.S.C. § 102 by Denning, or that claims

34–38, 43–46, 48–52, 55, and 57–60, which depend from claims 33 and 47, are more likely than not anticipated under 35 U.S.C. § 102 by Denning.

G. Obviousness Over Denning and FIPS PUB 140-1
i. Claims 7, 8, 23, and 24

Claim 7 depends from claim 1 and recites that "at least one of the data processing rules restricts access to an associated data portion to users or programs that use a specified level of encryption to subsequently store accessed data in the database." Claim 23 depends from claim 17 and recites a similar limitation. Claim 8 depends from claim 1 and recites that "at least one of the data processing rules restricts access to an associated data portion to users or programs that use a specified level of encryption to subsequently transmit accessed data." Claim 24 depends from claim 17 and recites a similar limitation.

Petitioner relies upon FIPS PUB 140-1's disclosure of a cryptographic module employing role-based authentication or identity-based authentication in four different security levels to meet the claimed specified level of encryption. Pet. 65–66 (citing Ex. 1007, 24). Patent Owner argues that "a 'level' of encryption refers to the strength of encryption that is to be used on data in a database," and that FIPS PUB 140-1's security levels are not levels of encryption. Prelim. Resp. 77 (citing Ex. 1001, col. 4, ll. 51–62).

FIPS PUB 140-1 is a document titled "Security Requirements for Cryptographic Modules" and was published on January 11, 1994. Ex. 1007, 1. FIPS PUB 140-1 describes "standard[s] to be used by Federal organizations where these organizations specify that cryptographic-based systems are to be used to provide protection for sensitive or valuable data."

Id. FIPS PUB 140-1 describes four security levels for cryptographic modules, and that the cryptographic modules perform either role-based authentication or identify-based authentication, or both, based upon its security level. *Id.* at 24–25.

We agree with Patent Owner that FIPS PUB 140-1's disclosure of security levels on pages 24–25 does not meet the claimed level of encryption. Petitioner does not provide any other evidence or rationale, specifically, as to why this limitation would have been obvious. *See* Pet. 62–66.

On this record, we are not persuaded that claims 7, 8, 23, and 24 are more likely than not unpatentable under 35 U.S.C. § 103 over Denning and FIPS PUB 140-1.

ii. Claims 12–14, 16, 28–30, and 32

Claims 12–14 and 16 depend from claim 1. Claim 12 recites that the requested data portion is encrypted with a first cryptographic key and that the associated data processing rules restrict access to the requested data portion to users or programs that possess the key. Claims 13 and 14 also require that requested data portions be encrypted with a cryptographic key. Claim 16 recites that the data portion comprises encrypted data. Claims 28–30 and 32 recite similar limitations, but depend from claim 17.

Petitioner argues that one of ordinary skill in the art would have been led by the teachings of Denning and FIPS PUB 140–1 to encrypt the requested data portions with cryptographic keys and to restrict access to the encrypted data portions to user or programs that possess the keys in order to protect the information. Pet. 62–73 (citing Ex. 1010 ¶¶ 80–86). Petitioner argues that Denning discloses using access controls and encryption together,

including the use of cryptographic keys to access data (*id*. at 66 (citing Ex. 1006, 151, 178, 206, 213, 229–230)) and FIPS PUB 140–1 discloses the use of cryptographic keys for decrypting content in an access control environment (*id*. at 66–73 (citing Ex. 1007, 12, 37–38)). According to Petitioner, one of ordinary skill in the art would have been motivated to combine Denning and FIPS PUB 140–1 to further protect the information. *See id*. at 64.

Patent Owner argues that Petitioner has failed to establish that one of ordinary skill in the art would have been led by Denning and FIPS PUB 140-1 to the limitations at issue. Prelim. Resp. 72–79. In particular, Patent Owner argues that Denning and FIPS PUB 140–1 "have vastly different target audiences and are meant to be implemented in significantly different types of security systems." *Id*. at 72–79.

The mere existence of differences between the prior art and the claim does not establish nonobviousness. *Dann v. Johnston*, 425 U.S. 219, 230 (1976). The issue is "whether the difference between the prior art and the subject matter in question 'is a difference sufficient to render the claimed subject matter unobvious to one skilled in the applicable art.'" *Dann*, 425 U.S. at 228–29 (citation omitted). To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *KSR Int'l v. Teleflex,* 550 US 398, 417 (2007).

Upon review of Petitioner's evidence and analysis, and taking into account Patent Owner's arguments, we are persuaded by Petitioner that modifying Denning's access matrix model to include encrypting the objects with cryptographic keys so that the data can only be accessed by users or programs having the keys would have been obvious to one of ordinary skill

in the art and is nothing more than the predictable use of prior art elements according to their established functions. *See KSR*, 550 U.S. at 417.

On this record, we are persuaded that claims 12–14, 16, 28–30, and 32 are more likely than not unpatentable under 35 U.S.C. § 103 over Denning and FIPS PUB 140-1.

iii. Claims 39, 40, 43–46, 53, 54, and 57–60

Petitioner argues that claims 39, 40, 43–46, 53, 54, and 57–60 are unpatentable under 35 U.S.C. § 103 over Denning and FIPS PUB 140-1. Pet. 62–73. These claims depend from claims 33 and 47, which recite the use of data categories. However, as discussed above with regard to the unpatentability of claims 33 and 47, Denning does not disclose the recited data categories. Petitioner does not rely upon FIPS PUB 140-1 to cure this deficiency of Denning, or provide any other rationale as to why the data category related limitation would have been obvious. *See id.*

Upon this record, we are not persuaded that claims 39, 40, 43–46, 53, 54, and 57–60 are more likely than not unpatentable under 35 U.S.C. § 103 over Denning and FIPS PUB 140-1.

H. Obviousness Over Denning and Shear

a. Claims 11 and 27

Claim 11 depends from claim 1 and recites "wherein at least one of the data processing rules specifies that activity logging is to occur during access to an associated data portion, and wherein access to the data portion is restricted based on whether activity logging is occurring." Claim 27 depends from claim 17 and recites a similar limitation.

Petitioner argues that although Denning does not expressly disclose logging, "[l]ogging is a well-known technique used to create an audit trail so that unauthorized attempts to access data can be logged and investigated." Pet. 73 (citing Ex. 1010 ¶ 89). Petitioner argues that Shear teaches using an audit trail or log for tracking a user's use of an encrypted database. Pet. 73–76 (citing Ex. 1008, Abstract, col. 5, ll. 62–68, col. 15, ll. 38–48, col. 18, l. 65, col. 21, l. 61–col. 2, l. 2). Petitioner asserts that one of ordinary skill in the art would have combined the teachings of Denning and Shear to obtain a processing rule that requires data logging for added security. Pet. 76 (citing Ex. 1010 ¶ 95). Patent Owner argues that Shear does not teach this limitation. Prelim. Resp. 79–80.

Shear is U.S. Patent No. 5,050,213 and titled "Database Usage Metering and Protection System and Method." Shear discloses a database access system that permits authorized users to access and to use a database and prevents unauthorized users from using or copying the database. Ex. 1008, col. 3, ll. 52–55. Shear discloses that when a user sends a database access request, the system requires the user to input identification and/or password information to determine whether the user is authorized to access the database. *Id*. at col. 15, ll. 7–30. If the user is authorized, the system logs information about the access into memory to create an audit trail, to detect unmonitored database use and tampering. *Id*. at col. 15, ll. 26–56, col. 21, ll. 61–68.

Upon review of Petitioner's evidence and analysis and taking into account Patent Owner's arguments, we are persuaded by Petitioner that modifying Denning's access matrix model to include a processing rule that requires data logging, in light of the teachings of Shear, is nothing more than

the predictable use of prior art elements according to their established functions. *See KSR*, 550 U.S. at 417.

On this record, we are persuaded that claims 11 and 27 are more likely than not unpatentable under 35 U.S.C. § 103 as obvious over Denning and Shear.

b. Claims 42 and 56

Petitioner argues that claims 42 and 56 are unpatentable under 35 U.S.C. § 103 over Denning and Shear. Pet. 73–76. These claims depend from claims 33 and 47, which recite the use of data categories. However, as discussed above with regard to the unpatentability of claims 33 and 47, Denning does not disclose the recited data categories. Petitioner does not rely upon Shear to cure this deficiency of Denning, or provide any other rationale as to why the data category related limitation would have been obvious. *See id.*

Upon this record, we are not persuaded that claims 42 and 56 are more likely than not unpatentable under 35 U.S.C. § 103 over Denning and Shear.

I. 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	n/a	1–60
§ 102	Denning	1–4, 6, 9, 17–20, 22, and 25
§ 103	Denning and FIPS PUB 140-1	12–14, 16, 28–30, and 32
§ 103	Denning and Shear	11 and 27

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 instituted as to:

claims 1–60 under 35 U.S.C. § 101;

claims 1–4, 6, 9, 17–20, 22, and 25 under 35 U.S.C. § 102 as being anticipated by Denning;

claims 12–14, 16, 21, 28–30, and 32 under 35 U.S.C. § 103 as being obvious over Denning and FIPS-PUB 140-1; and

claims 11 and 27 under 35 U.S.C. § 103 as being obvious over Denning and Shear.

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; the trial commencing on the entry date of this Order.

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