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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KENNY UNSER, SERGE BERNARD,
NIKHIL MALGATTI, JEAN-PIERRE GERARD, and PO HU

Appeal 2017-008681
Application 14/183,220
Technology Center 3600

Before MICHAEL J. STRAUSS, JEREMY J. CURCURI, and
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–20, which constitute all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

Appellants' invention is directed to an insurance-related risk modeling of customers based on their payment card behavior. Spec. ¶ 1. Claim 1, reproduced below, is representative of the claimed subject matter:

1. A risk assessment method comprising:
 - receiving transaction data regarding a financial transaction, the transaction data including a transaction attribute;
 - generating, via a processor, a customer level target specific variable layer from the transaction data;
 - modeling, via the processor, cardholder behavior with the customer level target specific variable layer to create an insurance risk model of cardholder behavior;
 - saving the insurance risk model of cardholder behavior to a non-transitory computer-readable storage medium.

REFERENCES AND REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 101 as directed to patent ineligible subject matter.

Claims 1–20 stand rejected under 35 U.S.C. § 112(b) or 35 U.S.C. § 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claims 1, 8, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Hyde (US 2008/0281741 A1; published Nov. 13, 2008), De La Motte (US 2007/0118449 A1; published May 24, 2007), and Curry et al. (US 2007/0294195 A1) (“Curry”).

Claims 2–7, 9–14, and 16–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable the combination of Hyde, De La Motte, Curry, and Official Notice.

Claims 1, 8, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Hyde, De La Motte, and Smith (US 2010/0274649 A1; published Oct. 28, 2010).

Claims 2–7, 9–14, and 16–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Hyde, De La Motte, Smith, and Official Notice.

ANALYSIS

35 U.S.C. § 101 Rejections

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4

in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (“Memorandum”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum, 84 Fed. Reg. at 52–57.

USPTO Memorandum, Step 2A, Prong 1

Under the first step in the *Alice/Mayo* framework, the Examiner determines the claims are directed to a fundamental economic practice, which is an abstract idea. Final Act. 2, 17. The Examiner determines “the recited steps of ‘receiving transaction data, generating [a] layer from transaction data, modeling behavior to create insurance risk model and saving [a] model,’” constitute a concept that “is an abstract idea that is not meaningfully different than [concepts] courts have found to be Abstract Idea[s].” Ans. 19; *see* Final Act. 17–18.

Appellants argue “the Final Office Action’s analysis rests on an overly broad extrapolation of the recited subject matter excludes key aspects of the claims, ignoring the ‘customer level target specific variable layer’ recited in the claims.” App. Br. 7–8. Appellants further argue the claims are not directed to a fundamental economic practice, and the “claims are directed to receiving transaction data regarding a financial transaction,”

which is “not a fundamental economic practice like risk management or intermediated settlement.” App. Br. 8. According to Appellants, “these elements (1) are not like any of the claims that the courts have found ineligible as directed to a fundamental economic practice long prevalent in our system of commerce, and (2) do not define some fundamental economic practice long prevalent in our system of commerce.” App. Br. 8–9.

Appellants do not persuasively argue why the claims do not recite an abstract idea, specifically, a fundamental economic practice. Appellants’ invention is titled Insurance Risk Modeling Method and Apparatus. Appellants generally seek to use transaction data regarding a financial transaction for risk assessment. Spec. ¶ 5. Appellants describe that transaction level data for use of payment cards “can only be used after it is summarized up to customer level.” Spec. ¶ 3. Appellants explain this is a problem because “this kind of summarization of information is a generic approach without using target information.” Spec. ¶ 3. To resolve this problem, Appellants seek to provide an insurance risk model for a cardholder based on cardholder transactions. Spec. ¶ 27. The risk model may be used in risk assessment to determine pricing for a variety of insurance application categories, such as life insurance, health insurance, automobile insurance, or homeowner’s insurance. Spec. ¶ 30.

Claim 1 recites a risk assessment method comprising (1) receiving transaction data regarding a financial transaction, the transaction data including a transaction attribute; (2) generating via a processor, a customer level target specific variable layer from the transaction data; (3) modeling, via the processor, cardholder behavior with the customer level target specific variable layer to create an insurance risk model of cardholder behavior; and

(4) saving the insurance risk model of cardholder behavior to a non-transitory computer-readable storage medium.

As grouped by the Memorandum, the category of abstract ideas includes:

(b) certain methods of organizing human activity—*fundamental economic principles or practices* (including hedging, *insurance, mitigating risk*); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations.

Memorandum, 84 Fed. Reg. at 52 (emphasis added). Claim 1 recites performing various steps resulting in a saved insurance risk model. None of these steps recite specific technological implementation details, but rather, receiving transaction data, generating a customer level target specific variable layer from the transaction data, and modeling to create an insurance risk level of cardholder behavior. Therefore, claim 1 recites insurance and mitigating risk, which are fundamental economic principles or practices under the Memorandum. Our reviewing court has found claims to be directed to abstract ideas when they recited similar subject matter. *See Alice*, 573 U.S. at 219–20 (concluding that use of a third party to mediate settlement risk is a “fundamental economic practice” and thus an abstract idea); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1338 (Fed. Cir. 2013) (identifying the concept of generating rule-based tasks for processing an insurance claim as an abstract idea); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (identifying the concept of “managing a stable value

protected life insurance policy by performing calculations and manipulating the results” as an abstract idea).

Accordingly, we conclude the claims recite a fundamental economic practice, which is one of the certain methods of organizing human activity identified in the Memorandum, and thus an abstract idea.

USPTO Memorandum, Step 2A, Prong 2

In determining whether the claims are “directed to” the identified abstract idea, we next consider whether the claims recite additional elements that integrate the judicial exception into a practical application.¹ We discern no additional element (or combination of elements) recited in the claims that integrates the judicial exception into a practical application. *See* Memorandum, 84 Fed. Reg. at 54–55.

Appellants argue “unlike other practices found ineligible by the courts, this is not just the computerization of some long-standing practice, but something that is fundamentally ‘rooted in computer technology’ like *DDR Holdings[, LLC v. Hotels.com, L.P.]*, 773 F.3d 1245 (Fed. Cir. 2014).” App. Br. 9. Appellants argue “independent claims 1, 8, and 15 address a business challenge that arises due to the technical limitations in modeling cardholder risk by using on a customer level target specific variable layer

¹ We acknowledge that some of the considerations at Step 2A, Prong Two, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office guidance). For purposes of maintaining consistent treatment within the Office, we evaluate them under Step 1 of *Alice* (Step 2A of the Office guidance). *See* Memorandum, 84 Fed. Reg. at 55 n.25, 27–32.

based on cardholder behavior.” App. Br. 10. Appellants argue the “claims do not ‘merely recite the performance of some business practice known from the pre-Internet world with the requirement to perform it on the Internet.’” App. Br. 10. Appellants argue the invention “addresses the network-centric challenge of extracting transaction attributes from transaction data received from a merchant bank, by providing a solution that is necessarily rooted in computer technology.” App. Br. 10.

We are not persuaded. Initially, we note Appellants argue, on the one hand that the claims “address a business challenge that arises due to the technical limitations in modeling cardholder risk,” and on the other hand that the claims “address[] the network-centric challenge of extracting transaction attributes from transaction data received from a merchant bank.” App. Br. 10. Appellants have not persuasively explained why the claims address a “computer-centric challenge,” or what “technical limitations” are addressed in the claims. Rather, Appellants’ Specification supports that the claimed invention addresses a business challenge, namely, using purchase data to analyze cardholder behavior. Spec. ¶¶ 1–3, 8–10. We are not persuaded the claims address the network-centric challenge of “of extracting transaction attributes from transaction data received from a merchant bank.” The claims do not recite “extracting” transaction attributes, only “receiving transaction data . . . including a transaction attribute.”

Appellants further argue the claims are “directed to using particular computer technology and devices in a very specific way to achieve new and useful results.” App. Br. 12. Appellants further argue the “claims result in the requirement of a computer system with improved functionality over a ‘generic’ computer.” App. Br. 12. According to Appellants, “[b]ecause the

recitations of the present claims would require specific programming, the resulting computer would be a *specific purpose* computer.” App. Br. 12.

Appellants’ arguments are not persuasive. The claims do not constitute an improvement to the functioning of the computer; they merely adapt the abstract idea to an execution of steps performed by a computer. Appellants do not provide persuasive argument that the additional claim elements, including the processor and storage medium, provide anything other than generic computer functionality. *See* Final Act. 2; Ans. 19. Appellants’ Specification supports that the claims merely recite generic computer components and functionality. *E.g.*, Spec. ¶ 15 (“Processor 1100 may be any central processing unit, microprocessor, micro-controller, computational device or circuit known in the art”); ¶ 26 (“Computer-readable storage media 1200 may be a conventional read/write memory such as a magnetic disk drive, floppy disk drive, optical drive, compact-disk read-only-memory (CD-ROM) drive, digital versatile disk (DVD) drive, high definition digital versatile disk (HD-DVD) drive, Blu-ray disc drive, magneto-optical drive, optical drive, flash memory, memory stick, transistor based memory, magnetic tape or other computer-readable memory device as is known in the art for storing and retrieving data”).

Contrary to Appellants’ arguments, the claims do not recite a particular machine or transformation for performing the claimed calculation methodology. *See* MPEP § 2106.05(b)–(c). The device (apparatus) is recited only at a high level of generality. Neither the claims nor the Specification provide any specific details regarding particular components that must be in the apparatus. *See* Spec. ¶¶ 14–16, 25, and 26 (“[r]isk assessment apparatus server 1000 may run a multi-tasking operating system

(OS) and include at least one processor or central processing unit (CPU) 1100, a non-transitory computer-readable storage medium 1200, and a network interface 1300”). In light of the generically recited apparatus and Appellants’ Specification, Appellants’ arguments do not persuade us the device to be a particular machine. *Contra* 84 Fed. Reg. 50, 55 (explaining that, if “an additional element implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine,” the additional element(s) may integrate the abstract idea into a practical application); 84 Fed. Reg. 50, 55 n.27 (citing MPEP § 2016.05(b)). Instead, with respect to the device, Appellants’ claims merely recite “‘apply it’ (or an equivalent) with the judicial exception, or merely includes instructions to implement an abstract idea on a [device], or merely uses a [device] as a tool to perform an abstract idea.” 84 Fed. Reg. 50, 55. Thus, the “apparatus” recited in the claims also fails to integrate the abstract concepts into a practical application.

For these reasons, we are not persuaded of error in the Examiner’s determination that the claims are directed to an abstract idea.

USPTO Memorandum, Step 2B

Turning to step 2 of the *Alice/Mayo* framework, we look to whether claim 1: (a) adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, or (b) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Memorandum, 84 Fed. Reg. at 56.

The Examiner determines the claims are

mere instructions to implement the idea on a computer, and recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities . . . in particular exchanging communications, transmitting and accessing information over a network, receiving and saving data by a processor and applying decision rules (modeling) by the computer.

Final Act. 2; *see also* Ans. 19.

Appellants argue “Appellants’ claims are necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of payment networks and specifying how interactions between computer components are manipulated to yield a desired result, which is non-routine and non-conventional.” App. Br. 11. Appellants argue “the computer processor acts in a very specific manner, communicates/receives specific information, and evaluates and allocates data in a specific manner,” which “go[es] well beyond what is routine and conventional.” App. Br. 11.

We are not persuaded. Even when viewed as a whole, nothing in the claims adds significantly more (i.e., an inventive concept) to the abstract idea. Similarly, as set forth above, the additional elements in the claim amount to no more than mere instructions to apply the exception using generic computer components (e.g., the processor, storage medium), which is insufficient to provide an inventive concept. Appellants do not direct our attention to anything in the Specification that indicates the claimed processor and storage medium perform anything other than well-understood, routine, and conventional functions, such as receiving, storing, and processing data. *See Elec. Power Group*, 830 F.3d at 1355 (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for

gathering, sending, and presenting the desired information”); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2015) (“That a computer receives and sends information over a network—with no further specification—is not even arguably inventive”); *Alice*, 573 U.S. at 224–26 (receiving, storing, sending information over networks insufficient to add an inventive concept); *see* Ans. 19. Nor have Appellants sufficiently explained how the processor’s functionality “go[es] well beyond what is routine and conventional.” *See* App. Br. 11. Therefore, we agree with the Examiner that the additional technological elements in the claims, when considered both individually and as an ordered combination, are directed to generic computer components that perform well-understood, routine, and conventional functions. *See* Ans. 19.

Accordingly, for the foregoing reasons, we sustain the Examiner’s 35 U.S.C. § 101 rejection of claims 1–21.

35 U.S.C. § 112 Rejections

Each of independent claims 1, 8, and 15 recite “a transaction attribute.” App. Br. 3–5 (emphasis added). Claims 2, 9, and 16 depend from claims 1, 8, and 15, respectively and recite “wherein the transaction attribute includes: a transaction account, a transaction time, and merchant details.” App. Br. 3–6. The Examiner determines “[t]he phrase ‘the transaction attribute’ is ‘singular’ but the phrase ‘including transaction account, transaction time, and merchant details’ recites more than one attribute.” Ans. 20. The Examiner determines “[i]t is unclear whether 1) the transaction attribute includes one of a transaction account, transaction time

and merchant details or 2) there are three transaction attributes: transaction account, transaction time and merchant details.” Final Act. 3.

Appellants argue “the transitional phrase ‘including’ is an open-ended term synonymous with the term ‘comprising,’” so “one of ordinary skill in the art would understand that the transaction attribute includes at least transaction account, transaction time, and merchant details.” App. Br. 13.

We are not persuaded by Appellants’ arguments. The test for indefiniteness is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986). Language in a claim is unclear if, when given its broadest reasonable interpretation consistent with the Specification, it is “ambiguous, vague, incoherent, opaque, or otherwise unclear in describing and defining the claimed invention,” *In re Packard*, 751 F.3d 1307, 1311 (Fed. Cir. 2014), or if it is “is amenable to two or more plausible claim constructions,” *Ex parte Miyazaki*, 89 USPQ2d 1207, 1211 (BPAI 2008) (precedential); *see also Ex parte McAward*, Appeal No. 2015-006416, 2017 WL 3669566 (PTAB 2017) (precedential) (discussing the test for indefiniteness during prosecution and affirming Miyazaki’s continued precedential status (at *2, n.3)).

Appellants’ argument that “transaction attribute includes at least transaction account, transaction time, and merchant details” is not responsive to the Examiner’s rejection. The issue is not whether the “transaction attribute” is limited to the transaction account, transaction time, and merchant details or may include other items. Rather, the issue is why a singularly claimed transaction attribute (*the transaction attribute*) *includes*

more than one attribute, as recited in the claim, and whether this renders the claim indefinite.

Appellants' Specification describes

[t]he cardholder's individual transaction data includes a transaction entry for each financial transaction performed with a payment card. Each transaction entry may include, but is not limited to: a transaction data, customer information . . . merchant details . . . purchase channel . . . product or service stock-keeping unit (SKU), and transaction amount.

Spec. ¶ 33. Therefore, according to Appellants' Specification, transaction data includes a transaction entry that includes a transaction data, merchant details, and transaction amount. Spec. ¶ 33.

Appellants also describe

For any insurance application 1130 with at least one transaction attribute of interest, $X_i(A; t, l)$ can denote a transaction attribute variable at transaction level belonging to an account A, by transaction time stamp t and transaction location l. For example, X can be payment amount or any transaction related attribute, and $V_A(x)$ can be a summarized variable at the customer level which can be any function of original transaction attribute x for a given individual risk model 1240, designated as target T.

Spec. ¶ 37. Therefore, further according to Appellants' Specification, payment (transaction) amount is a transaction related attribute. At the transaction level, the transaction attribute *belongs* to an account A and is *denoted* by transaction time stamp t and transaction location l.

Given the foregoing disclosure in Appellants' Specification, we agree with the Examiner that the claims are ambiguous in defining and describing the invention. Appellants' arguments do not lend further clarity.

Accordingly, we sustain the Examiner's 35 U.S.C. § 112 rejection of claims 1–20.

35 U.S.C. § 103(a) Rejections

Claims 1, 8, and 15 (rejections over Hyde, De La Motte, and Curry)

Appellants contend the references fail to teach or suggest “modeling, via the processor, cardholder behavior with the customer level target specific variable layer to create an insurance risk model of cardholder behavior,” as recited in independent claim 1, and commensurately recited in independent claims 8 and 15. App. Br. 15.

The Examiner finds the combination Hyde, De La Motte, and Curry teaches or suggests the disputed limitation, with Hyde being the primary reference. Final Act. 4–5 (citing Hyde ¶¶ 14, 51, and 55, De La Motte ¶¶ 20, 53). The Examiner finds Hyde teaches or suggests “modeling, via the processor, customer behavior with the customer level target specific variable layer to create a risk model of customer behavior,” but relies on De La Motte to teach or suggest a risk tolerance model for a cardholder and on Curry to teach or suggest that the risk model is an insurance risk model. Final Act. 4–5; Ans. 21–22. The Examiner reasons “it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Hyde's invention [with De La Motte] to include the customer is a cardholder . . . for the benefit of allowing cardholders to earn returns through secure pre-defined strategies that meets risk tolerance threshold.” Final Act. 5. The Examiner further reasons “it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Hyde's invention [with Curry] to include the risk model is an insurance risk model .

. . for the benefit of allowing insurance risk to be assessed based on financial behavior of credit card holder.” Final Act. 6; *see also* Ans. 22.

Appellants argue Hyde does not teach or suggest “the concept of a customer level target specific variable layer.” App. Br. 15. Appellants further argue Hyde does not teach or suggest an “insurance risk model of cardholder behavior being created based on the customer level target specific variable layer.” App. Br. 15. Appellants argue Curry also fails to teach or suggest “the concept of a customer level target specific variable layer.” App. Br. 15. Appellants also argue De La Motte fails to teach or suggest “that modeling of cardholder behavior with the customer level target specific variable layer to create an insurance risk model of cardholder behavior.” App. Br. 16.

Appellants further argue the Examiner’s alleged motivation to combine the references “is not found within any of the cited references, and only found within the Appellant’s specification.” App. Br. 16; *see also* App. Br. 13–14. Appellants argue “the Examiner is using impermissible hindsight reasoning to pick here-and-there from among the references to construct a hypothetical combination, which obviates the claims.” App. Br. 13. Appellants further argue “[t]he references themselves fail to teach why a system of allowing multiple (investment, insurance, lawyer, tax advisor, etc.) advisors to advise a customer (Abstract of Hyde), a revenue producing debit card system and method for users who have bank accounts (Abstract of De La Motte) and a method of deterring, detecting and mitigating fraud by monitoring behaviors and activities (Abstract of Curry) should be necessarily combined.” App. Br. 14. Appellants argue the Examiner’s

stated motivation to modify Hyde’s invention to include a customer is a card holder “is not found within any of the cited references.” App. Br. 16.

We are persuaded the Examiner has not sufficiently shown the combination of Hyde, De La Motte, and Curry teaches or suggests the disputed limitation. Hyde is generally directed to a system for consolidating financial information to allow multiple advisors to advise a customer with respect to financial products and/or services. Hyde Abstract. A customer has a profile that may include various types of information, including a risk tolerance preference that has been provided by the customer or derived from other information or transaction history. Hyde ¶ 14. The risk tolerance preference is used to check whether to allow or disallow a transaction to be processed, based on the associate label for risk of the instrument being purchased. Hyde ¶ 55. Hyde also describes generating and managing campaigns, where certain criteria can be layered, including risk tolerance, marital status, and other factors. Hyde ¶ 51.

De La Motte generally describes a Trust-Linked Debit Card system that is linked to a trust account and allows overnight balances to be invested at a profit for the benefit of the account holder. De La Motte ¶ 17. The cardholders “can earn substantial returns through safe and secure pre-defined investments strategies that meet pre-established risk tolerance threshold.” De La Motte ¶ 20. A new account holder may register his investment preferences and risk tolerance threshold. De La Motte ¶ 53.

Curry describes methods to deter, detect, and/or mitigate fraud by evaluating and monitoring an individual’s information for changes in fraud risk. Curry Abstract. Information is extracted from various sources and entered into a risk assessment algorithm that operates on the entered

information and generates risk assessment data. Curry Abstract. The risk assessment data is evaluated to make a determination of fraud risk with respect to the individual and may include, for example, evidence of irresponsible financial behavior such as not paying minimum balances due on credit cards. Curry ¶ 46. Curry describes that may be used to create a new insurance policy or to adjust a premium and/or terms of a policy in response to the fraud risk determination. Curry, claim 28.

The Examiner has not sufficiently explained how Hyde teaches or suggests “modeling, via the processor, customer behavior with the customer level target specific variable layer to create a risk model of customer behavior.” Rather, as discussed above, Hyde describes a customer risk tolerance preference that is part of a customer’s profile and is used to determine whether a financial transaction should be allowed or disallowed. The customer risk tolerance preference, along with other customer profile information, may also be used for campaigns. The Examiner has not explained how this disclosure teaches “model[ing] . . . customer behavior” and creat[ing] a risk model of customer behavior.” The Examiner further has not sufficiently explained how the addition of De La Motte, as combined with Hyde, teaches or suggests the “cardholder behavior” or “creat[ing] a risk tolerance model for cardholder.” Similar to Hyde, De La Motte teaches a customer risk tolerance threshold that is used for investment purchases as relating to De La Motte’s trust-linked debit card.

Moreover, the Examiner’s rationale to combine Hyde, De La Motte, and Curry lacks a rational underpinning because there is a lack of explanation as to why one would have combined the prior art reference teachings. The Examiner has the initial duty of supplying the requisite

factual basis and may not resort to speculation, unfounded assumptions, or hindsight reconstruction to supply deficiencies in the factual basis. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“To facilitate review, [the obviousness] analysis should be made explicit.”); *see also, In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) Specifically, there is a gap in reasoning as to why De LaMotte’s trust-linked debit card or Curry’s methods to deter, detect, and/or mitigate fraud would have application in Hyde’s consolidated financial information system. The Examiner’s reasoning to modify Hyde with Curry (“for the benefit of allowing insurance risk to be assessed based on financial behavior of credit card holder”) merely describes the problem identified by Appellants in Appellants’ Specification. *See* Spec. ¶ 1 (“enable insurance-related risk behavior modeling of individuals based on their payment card purchases”). Using the claimed invention as a template for its own reconstruction is “an illogical and inappropriate process by which to determine patentability.” *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983). Finding the Examiner’s explanation for concluding that the skilled artisan would have combined Hyde with De La Motte and Curry flawed, we are left with only hindsight bias of which *KSR* warns us. *See KSR*, 550 U.S. at 401.

Because we agree with at least one of the arguments advanced by Appellants, we need not reach the merits of Appellants’ other arguments. Accordingly, on this record, we are persuaded the Examiner erred. We, therefore, do not sustain the Examiner’s 35 U.S.C. § 103(a) rejections over

Hyde, De La Motte, and Curry of independent claims 1, 8, and 15, and, for the same reasons, dependent claims 2–7, 9–14, and 16–20.

Claims 1, 8, 15 (rejections over Hyde, De La Motte, and Smith)

The Examiner rejects claims 1, 8, and 15 over Hyde, De La Motte, and Smith. Final Act. 10–12. The Examiner replaces Curry with Smith, and similarly finds Smith teaches or suggest “insurance risk model.” Final Act. 12. The Examiner further reasons “it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Hyde’s invention [with Smith] to include the risk model is an insurance risk model . . . for the benefit of allowing insurance risk to be assessed based card-holder type.” Final Act. 12. Appellants present similar arguments with respect to Smith, and the combination of Hyde, De La Motte, and Smith, as described above. App. Br. 19–22.

For the same reasons as set forth above, do not sustain the Examiner’s 35 U.S.C. § 103(a) rejections over Hyde, De La Motte, and Smith of independent claims 1, 8, and 15, and, for the same reasons, dependent claims 2–7, 9–14, and 16–20.

DECISION

We affirm the Examiner’s 35 U.S.C. § 101 rejection of claims 1–20.

We affirm the Examiner’s 35 U.S.C. § 112 rejection of claims 1–20.

We reverse the Examiner’s 35 U.S.C. § 103(a) rejections of claims 1–20.

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Because we affirm at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision to reject all of the pending claims.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED