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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CURTIS VILLARS

Appeal 2017-000776¹
Application 13/721,216
Technology Center 3600

Before ST. JOHN COURTENAY III, LARRY J. HUME, and
JOYCE CRAIG, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1–11 and 13–23, which are all the claims pending in the application. Appellant has canceled claim 12. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellant, the real party in interest is MasterCard International Inc. App. Br. 2.

STATEMENT OF THE CASE²

The Invention

Appellant's disclosed embodiments and claimed invention relate "to the identification of consumer spending behaviors in a geographic area, specifically the aggregation of spending behaviors of consumers in a geographic area based on purchasing and geographic centroids." Spec. ¶ 1.

Exemplary Claim

Claim 1, reproduced below, is representative of the subject matter on appeal (*emphases* added to contested prior-art claim limitations):

1. A method for identifying spending behaviors in a geographic area, comprising:

electronically storing, in a geographic database of a processing server, a plurality of geographic centroids, wherein each geographic centroid corresponds to a centroid of a predefined geographic area;

receiving, by a receiving device of the processing server, a plurality of financial transactions involving each consumer of a plurality of consumers from a financial transaction processing server, *wherein each financial transaction contains no personally identifiable information for the each consumer of the plurality of consumers;*

identifying, by a processing device of the processing server, a geographic location of each financial transaction of the plurality of financial transactions by receiving the geographic location from a mobile communication device used

² Our decision relies upon Appellant's Appeal Brief ("App. Br.," filed April 4, 2016); Reply Brief ("Reply Br.," filed Oct. 21, 2016) (Examiner's Answer ("Ans.," mailed Aug. 26, 2016); Final Office Action ("Final Act.," mailed Nov. 5, 2015); and the original Specification ("Spec.," filed Dec. 20, 2012).

in each financial transaction and storing the geographic location in a transaction database;

calculating, by the processing device of the processing server, for each consumer of the plurality of consumers, a purchase centroid of the financial transactions involving the consumer based on a centroid of the identified geographic location of the financial transactions involving the consumer;

analyzing, by the processing device of the processing server, for each consumer, spending behaviors based on the financial transactions involving the consumer;

associating, by the processing device of the processing server, the analyzed spending behavior for each consumer with the corresponding purchase centroid;

associating, in the transaction database of the processing device, the analyzed spending behaviors for each purchase centroid with a predetermined number of geographic centroids based on the distance from the purchase centroid to each of the predetermined number of geographic centroids; and

aggregating, in a consumer database of the processing device, each of the spending behaviors associated with each geographic centroid of the plurality of geographic centroids such that each corresponding geographic area is associated with aggregated spending behaviors,

wherein the predetermined number of geographic centroids is based upon concealing each consumer's identification.

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

Fiedler et al. ("Fiedler")	US 6,883,708 B1	April 26, 2005
Taveau et al. ("Taveau")	US 2011/0320345 A1	Dec. 29, 2011
Amaro et al. ("Amaro")	US 2013/0124263 A1	May 16, 2013
Favero et al. ("Favero")	US 8,655,726 B1	Feb.18, 2014

*Rejections on Appeal*³

R1. Claims 1–11 and 13–23 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 14, 18.

R2. Claims 1, 2, 7–11, 13, 14, and 19–23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Amaro, and Applicant's Admitted Prior Art. Final Act. 22.

R3. Claims 1, 2, 6–11, 13, 14, and 18–23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Amaro, Taveau, and Applicant's Admitted Prior Art. Final Act. 41.

R4. Claims 3–5 and 15–17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Amaro, Fiedler, and Applicant's Admitted Prior Art. Final Act. 44.

R5. Claims 6 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Amaro, Taveau, and Applicant's Admitted Prior Art. Final Act. 48.

CLAIM GROUPING

Based on Appellant's arguments (App. Br. 12–24), we decide the appeal of patent-ineligible subject matter Rejection R1 of claims 1–11 and 13–23 on the basis of representative claim 1; and we also decide the appeal of obviousness Rejection R2 of claims 1, 2, 7–11, 13, 14, and 19–23 on the basis of representative claim 1.

We decide the appeal of claims 1, 2, 6–11, 13, 14, and 18–23 rejected under rejection R3, claims 3–5 and 15–17 rejected under rejection R4, and

³ The Examiner withdrew the 35 U.S.C. § 112 rejections. Final Act. 2.

claims 6 and 18 rejected under rejection R5, not argued separately or with specificity, *infra*.⁴

ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. We do not consider arguments Appellant could have made but chose not to make in the Briefs, and we deem any such arguments waived. 37 C.F.R. § 41.37(c)(1)(iv).

We disagree with Appellant's arguments with respect to claim 1 and, unless otherwise noted, we incorporate by reference herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellant's arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 101 Rejection R1 of Claims 1–3, 5–13, 16–28, and 30–35

Issue 1

Appellant argues (App. Br. 12–17) the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

⁴ "Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(iv). In addition, when Appellant does not separately argue the patentability of dependent claims, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

Did the Examiner err in concluding claim 1 is patent-ineligible by being directed to fundamental economic/business practices and methods of organizing human activity without providing an improvement to the underlying technology or functioning of the computer?

Analysis

Alice Framework

Section 101 provides that anyone who "invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" may obtain a patent. 35 U.S.C. § 101. The Supreme Court has repeatedly emphasized that patent protection should not extend to claims that monopolize "the basic tools of scientific and technological work." *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). Accordingly, laws of nature, natural phenomena, and abstract ideas are not patent-eligible subject matter. *Id.*

The Supreme Court's two-part *Mayo/Alice* framework guides us in distinguishing between patent claims that impermissibly claim the "building blocks of human ingenuity" and those that "integrate the building blocks into something more." *Alice*, 134 S. Ct. at 2354. First, we "determine whether the claims at issue are directed to a patent-ineligible concept." *Id.* at 2355. If so, we "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." *Id.* at 2357 (quoting *Mayo*, 566 U.S.

at 72, 79). While the two steps⁵ of the *Alice* framework are related, the "Supreme Court's formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). We note the Supreme Court "has not established a definitive rule to determine what constitutes an 'abstract idea'" for the purposes of step one. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (citing *Alice*, 134 S. Ct. at 2357).

Alice Step 1 — Abstract Idea

Our reviewing court has held claims ineligible as being directed to an abstract idea when they merely collect electronic information, display information, or embody mental processes that could be performed by humans. *Elec. Power Grp.*, 830 F.3d at 1353–54 (collecting cases). At the same time, "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Alice*, 134 S. Ct. at 2354 ("[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.").

Appellant contends, the claimed subject matter "reflects a technical solution to a technical problem. . . . The claims relate to the identification of

⁵ Applying this two-step process to claims challenged under the abstract idea exception, the courts typically refer to step one as the "abstract idea" step and step two as the "inventive concept" step. *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016).

consumer spending behaviors in a geographic area, specifically the aggregation of spending behaviors of consumers in a geographic area based on purchasing and geographic centroids." App. Br. 7, 8. Appellant further argues against the claims "reciting a mathematical formula" or "something a human could do using a pen and paper." App. Br. 11–12.

Appellant furthermore argues:

The claimed invention as a whole must be considered. Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). Claim 1 occurs at a single entity, the "processing server". Thus, the Office's example of having a first company print a report (note that *printing* is not a human function, but a computer function) which takes out PII ^[6] and having a second person analyze the data is *two separate* entities reviewing the data. Thus, as stated previously, there is no way that a human can gather data without PII, because by physically gathering the data, the human would know where and who the data came from. Furthermore, the data gathered in claim 1 has to do with potentially millions of transactions in order to determine spending behavior in a geographic region, which is impossible for a human to do in an efficient manner to deliver accurate results.

App. Br. 12. In addition, Appellant contends:

Further akin to Example 2 and the Court's opinion in *DDR Holdings*, the Appellant's claims do not "merely recite the performance of some business practice known from the pre-[computer] world with the requirement to perform it on [the computer]." *See* Examples, P. 6. Appellant's claimed solution is instead "necessarily rooted in computer technology in order to

⁶ Personally Identifiable Information (PII).

overcome a problem specifically arising in the realm of computer networks." *Id.*

App. Br. 13.

In response, the Examiner concludes the appealed claims are directed to a judicial exception, i.e., an abstract idea without significantly more because "the act of 'analyzing' spending behaviors of a consumer is a mental process (e.g. thinking) that can be performed manually, or by a human using a pen and paper." Ans. 3. The Examiner explains "In Electric Power Group, the focus of claims on 'collecting information, analyzing it, and displaying certain results of the collection and analysis' or 'analyzing information of a specified content,' without any particular inventive technology, is directed to an abstract idea." *Id.* The Examiner finds that each of the limitations can be performed by a person or by a conventional computer. Ans. 4.

Under the "abstract idea" step we must evaluate "the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs*, 838 F.3d at 1257 (citation omitted).

Turning to the claimed invention, claim 1 recites, "[a] method for identifying spending behaviors in a geographic area." Claim 1 (preamble). Method claim 1's limitations also require various steps including receiving, storing, identifying, analyzing, and aggregating information, i.e., receiving financial transaction information; identifying a geographic location of each financial transaction; calculating a purchase centroid for each consumer's financial transactions; analyzing consumer spending behaviors based upon the consumer's financial transactions; associating analyzed spending behavior for each consumer with a corresponding purchase centroid;

associating spending behaviors for each purchase centroid with predetermined geographic centroids based upon distance; and aggregating, in a database, spending behaviors "such that each corresponding geographic area is associated with aggregated spending behaviors, wherein the predetermined number of geographic centroids is based upon concealing each consumer's identification." Claim 1.

The Examiner concludes claim 1 is directed to an abstract idea:

[A]ssociating transactions with a purchase area, then associating the purchase area with a larger geographic area [storing geographic centroids; receiving transactions involving consumers; identifying geographic locations for each financial transaction; calculating a purchase centroid of the financial transactions; analyzing spending behaviors of the consumer; associating the behavior for each consumer with the purchase centroid; and aggregating each spending behavior with the geographic centroids such that each geographic area is associated with aggregated spending behaviors]. This is a method of [organizing] human activity and accordingly, is viewed as an abstract idea, similar to the idea of itself of mental process (thinking) that can be performed in the human mind, or by a human using a pen and paper.

Final Act. 14–15.

Under step one, we agree with the Examiner that the invention claimed in independent claim 1 is directed to an abstract idea, i.e., fundamental economic and business practices, e.g., determining sales/purchase patterns, and methods of organizing human activity. *See* Ans. 2–4.

As the Specification describes: "The present disclosure relates to the identification of consumer spending behaviors in a geographic area, specifically the aggregation of spending behaviors of consumers in a geographic area based on purchasing and geographic centroids." Spec. ¶ 1.

We find this type of activity, i.e., identifying and aggregating consumer spending behaviors in a geographic area based on purchasing and geographic centroids could be carried out by a human with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.").⁷

Our reviewing court has previously held other patent claims ineligible for reciting similar abstract concepts. For example, while the Supreme Court has enhanced the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, they continue to "treat[] analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) (alteration in original) (quoting *Elec. Power Grp.*, 830 F.3d at 1354).⁸

In this regard, claim 1 is similar to claims our reviewing court has found patent ineligible in *Elec. Power Grp.*, 830 F.3d at 1353–54 (collecting information and "analyzing information by steps people go through in their

⁷ *CyberSource* further guides that "a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101." *CyberSource*, 654 F.3d at 1373.

⁸ We find computing centroids, e.g., area centroids, to be known in the art as involving the use of algorithms, as acknowledged by Appellant. *See* Spec. ¶ 50 ("Methods for calculating the purchase centroid 306 will be apparent to persons having skill in the relevant art as discussed herein, such as identifying the geographic location of each financial transaction including the consumer and calculating the purchase centroid 306 using known centroid calculation methods.").

minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category").

Therefore, in agreement with the Examiner, we conclude claim 1 involves nothing more than receiving, identifying, calculating, storing, analyzing and aggregating data, without any particular inventive technology — an abstract idea. *See Elec. Power Grp.*, 830 F.3d at 1354. We further refer to *Content Extraction*, where the Federal Circuit has provided additional guidance on the issue of statutory subject matter by holding claims to collecting data, recognizing certain data within the collected data set, and storing that recognized data in memory were directed to an abstract idea and therefore unpatentable under § 101. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343 (Fed. Cir. 2014).

Accordingly, on this record, and under step one of *Alice*, we agree with the Examiner's conclusion the claims are directed to an abstract idea.

Alice Step 2 — Inventive Concept

If the claims are directed to a patent-ineligible concept, as we conclude above, we proceed to the "inventive concept" step. For that step we must "look with more specificity at what the claim elements add, in order to determine 'whether they identify an "inventive concept" in the application of the ineligible subject matter' to which the claim is directed." *Affinity Labs*, 838 F.3d at 1258 (quoting *Elec. Power Grp.*, 830 F.3d at 1353).

In applying step two of the *Alice* analysis, our reviewing court guides we must "determine whether the claims do significantly more than simply describe [the] abstract method" and thus transform the abstract idea into

patentable subject matter. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any "additional features" in the claims that constitute an "inventive concept," thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. *Alice*, 134 S. Ct. at 2357. Those "additional features" must be more than "well-understood, routine, conventional activity." *Mayo*, 566 U.S. at 79.

Evaluating representative claim 1 under step 2 of the *Alice* analysis, we agree with the Examiner that it lacks an inventive concept that transforms the abstract idea of identifying and aggregating spending behaviors in a geographic area into a patent-eligible application of that abstract idea. *See* Ans. 15.⁹

We agree with the Examiner because, as in *Alice*, we find the recitation of identifying spending behaviors in a geographic area by calculating, analyzing and aggregating data (claim 1) is simply not enough to transform the patent-ineligible abstract idea here into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2357 ("[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.").¹⁰

⁹ The Examiner finds:

The functions identified here — store, receive, identify, compare, and store- are all conventional computer functions and/or are part of the abstract idea of automating tasks that can be performed mentally (a person looking at receipts of a consumer, a person determining the geographic area).

Ans. 15.

¹⁰ Appellant merely alleges:

Accordingly, based upon the guidance from our reviewing courts above, on this record, we are not persuaded of error in the Examiner's conclusion that the appealed claims are directed to patent-ineligible subject matter. Therefore, we sustain the Examiner's § 101 rejection of independent claim 1, and grouped claims 2–11 and 13–23, not argued separately, and which fall therewith. *See Claim Grouping, supra.*

2. § 103 Rejection R2 of Claims 1, 2, 7–11, 13, 14, and 19–23

Issue 2

Appellant argues (App. Br. 23–36) the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as being obvious over the combination of Favero, Amaro, and Applicant's Admitted Prior Art is in error. These contentions present us with the following issues:

Further akin to Example 2 and the Court's opinion in *DDR Holdings*, the Appellant's claims do not "merely recite the performance of some business practice known from the pre-[computer] world with the requirement to perform it on [the computer]." *See Examples*, P. 6. Appellant's claimed solution is instead "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *Id.* The Appellant's claims provide methods and systems for improving the manner in which specific spend profiles are determined for consumers. Thus, the present claims are similar to those of Example 2, for at least the reasons set forth above (e.g., because they are rooted in and require technology and provide a technical improvement inseparable from the devices recited in the Appellant's claims).

App. Br. 13. We disagree with this contention because we find nothing in Appellant's Specification or claim identifies an improvement in the underlying conventional computer technology.

(a) Did the Examiner err in finding the cited prior art combination teaches or suggests "[a] method for identifying spending behaviors in a geographic area" that includes, *inter alia*, the steps of "receiving . . . financial transactions . . . wherein each financial transaction contains no personally identifiable information for the each consumer of the plurality of consumers;" "identifying . . . a geographic location of each financial transaction . . . [and] storing the geographic location in a transaction database;" "calculating . . . a purchase centroid of the financial transactions;" "associating . . . the analyzed spending behavior for each consumer with the corresponding purchase centroid;" "associating . . . the analyzed spending behaviors for each purchase centroid with a predetermined number of geographic centroids;" "wherein the predetermined number of geographic centroids is based upon concealing each consumer's identification," as recited in claim 1?

(b) Did the Examiner further err in rejecting claim 1 by relying upon improper motivation to combine the cited prior art in the manner suggested?

Analysis

(a) The Reference Combination Teaches or Suggests all Limitations

Appellant argues, "the Favero patent discusses a method and system for identifying a unique geographical area based upon the spending habits of a single **known** consumer [and uses] personally identifiable information (PII)." App. Br. 26. "In contrast to the system and method disclosed in Favero, Appellant's claims are directed toward a technical solution for identifying consumer spending behaviors within a geographical

area based upon the geographic and purchasing centroids . . . [and] offer several advantages over the cited Favero patent." *Id.* (citing Spec. ¶¶ 4–7, and 28).

Here, we find Appellant is arguing the references separately. We are not persuaded by Appellant's arguments because the Examiner cites Amaro, not Favero, for teaching or suggesting the recited negative limitation involving avoidance of using "personally identifiable information." Ans. 15.

Appellant also argues "the geographic area *derived* from the process disclosed in Favero is not the equivalent of a predefined geographic area as recited in Appellant's claims, rather, it is an area determined based upon a process of analyzing consumer data (i.e., the geographic area resulting from Favero's disclosed system and method)." App. Br. 27.

We are not persuaded by Appellant's arguments because we find Favero's identification of a geographic location of a payee, and deriving a consumer's shopping habits, teaches or at least suggests the disputed limitation. Favero, col. 10, ll. 51–63.

Appellant also argues the prior art does not disclose "calculating . . . a purchase *centroid*." App. Br. 30–31. However, we are not persuaded by Appellant's argument because Appellant's own Specification admits that calculating a centroid is well known in the art. Spec. ¶ 50, Ans. 20–21.

Thus, on this record, we find a preponderance of the evidence supports the Examiner's findings that the combination of Favero, Amaro, and Applicant's Admitted Prior Art teach or suggest all the claim limitations of claim 1.

(b) The Examiner Provided Proper Motivation to Combine

Appellant states "[p]lease note, that as stated above in the claim, each of these financial transactions do not contain PII." App. Br. 24. Appellant contends "Favero is using personally identifiable information (PII) and thereby *teaching away* from a primary purpose of the present teachings of the avoidance of using PII." App. Br. 26.

Regarding Appellant's motivation to combine argument, the Examiner identifies the relevant portions of each of the references relied on throughout the Final Action and Examiner's Answer. *See* Final Act. 22–35; Ans. 15–26. To the extent that the Examiner relies on the knowledge of one of ordinary skill in the art to combine the teachings of the references, this practice is consistent with current case law. For example, the Supreme Court explains:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. *See In re Kahn*, 441 F.3d 977, 988 (C.A.Fed.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"). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007).

Our reviewing court guides, "in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Further, the Federal Circuit has held "' [a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.'" *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) (quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)).

We are unpersuaded by Appellant's arguments because Favero does not discredit using personally identifiable information. In fact, the Examiner finds that Favero teaches that one can sweep out a certain distance from a centered zip code, which at least suggests information that contains "no personally identifiable information." Ans. 15.

In this case, the Examiner's conclusions of obviousness are clearly articulated and are based on detailed factual findings that are supported by the references of record. *See* Final Act. 28, 30–31, 34–35. We find the Examiner provided sufficient articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *See KSR* 550 U.S. at 418.

Moreover, Appellant has not demonstrated that the Examiner's proffered combination of references would have been "uniquely challenging or difficult for one of ordinary skill in the art." *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418). Nor has Appellant provided objective evidence of secondary

considerations which our reviewing court guides "operates as a beneficial check on hindsight." *Cheese Sys., Inc. v. Tetra Pak Cheese and Powder Sys.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

Regarding Appellant's remaining arguments in the Appeal Brief, we note the Examiner has addressed these arguments in the Answer. Ans. 15–26. Furthermore, although Appellant files a Reply Brief, Appellant does not address the Examiner's further findings and clarifications in the Answer regarding the 103 rejections. Arguments not made are waived.

Accordingly, on this record, we are not persuaded of error in the Examiner's reliance on the cited prior art combination to teach or suggest the disputed limitations of claim 1, nor do we find error in the Examiner's resulting legal conclusion of obviousness. Therefore, we sustain the Examiner's obviousness rejection R2 of independent claim 1, and grouped claims 2, 7–11, 13, 14, and 19–23 which fall therewith. *See Claim Grouping, supra.*

3. § 103 Rejection R3 of Claims 1, 2, 6–11, 13, 14, and 18–23

The Examiner cumulatively rejects claim 1 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Applicant's Admitted Prior Art, Amaro, and Taveau. Final Act. 41. The only limitation alternatively rejected is "by receiving the geographic location from a mobile communication device used in each financial transaction." *Id.*

Similar to the motivation argument in Rejection R1, *supra*, Appellant argues Taveau discloses PII and therefore does not disclose the limitations of claim 1. App. Br. 38–39. However, as explained above in regards to

claim 1, the Examiner cites Amaro, not Taveau, for the concealed PII limitation. Therefore, Appellant is again arguing the references separately.

In view of the lack of any other substantive arguments directed to obviousness Rejection R3 of claims 1, 2, 6–11, 13, 14, and 18–23 under § 103 (*see* App. Br. 14-16), we sustain the Examiner's rejection of these claims. Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

4. § 103 Rejection R4 of Claims 3–5 and 15–17

The Examiner rejects claims 3–5 and 15–17 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Applicant's Admitted Prior Art, Amaro, and Fiedler. Final Act. 44.

Appellants argue "The data collected by Favero is particular to a specific consumer, and thus Favero does not disclose identifying the geographic location of each financial transaction without PII." App. Br. 37.

However, as explained above in regards to claim 1, the Examiner cites Amaro, not Favero, for the "without PII" limitation.¹¹ Therefore, Appellant is again arguing the references separately.

In view of the lack of any other substantive arguments directed to obviousness Rejections R4 of claims 3–5 and 15–17 under § 103 (*see* App. Br. 36–37), we sustain the Examiner's rejection of these claims. Arguments not made are waived.

¹¹ The negative limitation "wherein the predetermined number of geographic centroids is based upon *concealing each consumer's identification*" (i.e., without Personally Identifiable Information or PII) is recited in independent claim 1, from which claims 3-5 depend, and also in independent claim 13, from which claims 15–17 depend.

5. § 103 Rejection R5 of Claims 6 and 18

The Examiner rejects claims 6 and 18 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Favero, Applicant's Admitted Prior Art, Amaro, and Taveau. Final Act. 48.

Appellant argues "The data provided by Taveau specifically discloses PII since a user profile is identified, as well as personal payment information for each transaction." App. Br. 38.

However, as explained above in regards to claim 1, the Examiner cites Amaro, not Taveau, for the concealed PII limitation. Therefore, Appellant is again arguing the references separately.

In view of the lack of any other substantive arguments directed to obviousness Rejections R5 of claims 6 and 18 under § 103 (*see* App. Br. 37–38), we sustain the Examiner's rejection of these claims. Arguments not made are waived.

CONCLUSIONS

(1) The Examiner did not err regarding Rejection R1 of claims 1–11 and 13–23 under 35 U.S.C. § 101, as being directed to a patent-ineligible judicial exception, and we sustain the rejection.

(2) The Examiner did not err with respect to obviousness Rejections R2 through R5 of claims 1–11 and 13–23 under 35 U.S.C. § 103(a) over the cited prior art combinations of record, and we sustain the rejections.

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DECISION

We affirm the Examiner's decision rejecting claims 1–11 and 13–23.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED