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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD HAND, WENDY LEVITT,
DAVID PEREIRA, ANNA AUSTIN, GREGORY COLES,
DUANE JACOBSEN, VINNY KHOSLA,
THOMAS LUNSFORD, RENEE RICHARDS, and
LEIGH TOMASKI

Appeal 2017-007469
Application 11/161,467¹
Technology Center 3600

Before ROBERT E. NAPPI, ERIC S. FRAHM, and LARRY J. HUME,
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 and 65–83, which are all claims pending in the application. Appellants have canceled claims 2–64. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellants, the real party in interest is III Holdings 1, LLC. App. Br. 3.

STATEMENT OF THE CASE²

The Invention

Appellants' disclosed embodiments and claimed invention "relate[] generally to a method and system for tracking tickets, and more specifically to a method and system for tracking unused electronic tickets and for providing refunds for those tickets." Spec. ¶ 2.

Exemplary Claim

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

1. A method comprising:
 - a computing system retrieving, from a central reservation system database, information regarding a travel ticket;
based on the retrieved information, the computing system determining for the travel ticket that a time interval for an unused segment of a trip associated with the travel ticket has elapsed,
wherein the time interval corresponds to an aging period greater than zero days for the travel ticket and is measured starting on or after a travel date of the unused segment;
calculating, by the computer system, in response to the determining, a residual value of the travel ticket; and
initiating, by the computer system, a refund or credit for the residual value, wherein the determining and the initiating are performed without a request by a user for a refund or credit for the travel ticket.

² Our decision relies upon Appellants' Appeal Brief ("App. Br.," filed Nov. 21, 2016); Reply Brief ("Reply Br.," filed Apr. 14, 2017); Examiner's Answer ("Ans.," mailed Feb. 14, 2017); Final Office Action ("Final Act.," mailed Feb. 19, 2016); and the original Specification ("Spec.," filed Aug. 4, 2005)

Prior Art

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

Thomas et al. ("Thomas") US 2002/0091571 A1 July 11, 2002
Gardner et al. ("Gardner") US 2002/0178034 A1 Nov. 28, 2002

*Rejections on Appeal*³

R1. Claims 1 and 65–83 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3.

R2. Claims 1 and 65–83 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gardner in view of the Examiner's taking of Official Notice. Final Act. 11 *et seq.*; Ans. 2.

CLAIM GROUPING

Based on Appellants' arguments (App. Br. 7–22) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of patent-ineligible subject matter Rejection R1 of claims 1 and 65–83 on the basis of representative claim 1; and we also decide the appeal of obviousness Rejection R2 of claims 1 and 65–83 on the basis of representative claim 1.⁴

³ The Examiner has withdrawn the rejection of claim 1 on the ground of nonstatutory obviousness-type double patenting (OTDP) as being unpatentable over claims 1–6, 8–10, 13–16, and 19–23 of Hand '313 in view of Gardner and Thomas. *See* Advisory Action mailed Apr. 29, 2016.

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 Appellants do not separately argue the patentability of

ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellants. To the extent Appellants have not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

We disagree with Appellants' 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 Appellants' arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 101 Rejection R1 of Claims 1 and 65–83

Issue 1

Appellants argue (App. Br. 9–17; Reply Br. 2–3) 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:

Under our governing case law concerning 35 U.S.C. § 101, did the Examiner err in concluding claim 1 is directed to a judicial exception, i.e., an abstract idea, without significantly more, and thus is patent-ineligible under § 101?

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).

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. *Alice Corp.*, 134 S. Ct. at 2354.

The Supreme Court's two-part *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 Corp.*, 134 S. Ct. at 2354 (internal quotation marks, citation, and bracketing omitted). 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). Although the two steps 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).

In *Enfish*, our reviewing court held claims directed to a self-referential logical model for a computer database patent-eligible under step one of *Alice*. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1330 (Fed. Cir. 2016). The disclosed technique enabled faster searching and more effective storage of data than previous methods. *Id.* at 1333. The court found the claims directed to "a specific improvement to the way computers operate, embodied in the self-referential table" (*id.* at 1336), and explained that the claims are "not simply directed to *any* form of storing tabular data, but instead are specifically directed to a *self-referential table* for a computer database" that functions differently than conventional databases. *Id.* at 1337.

In *McRO*, the claims were not held to be abstract because they recited a "specific . . . improvement in computer animation" using "unconventional rules that relate[d] sub-sequences of phonemes, timings, and morph weight sets." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1302–03, 1307–08, 1314–15 (Fed. Cir. 2016). In *McRO*, "the incorporation of the claimed rules, not the use of the computer," improved an existing technological process. *Id.* at 1314.

However, our reviewing court has held claims ineligible as 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. Abstract ideas may include, but are not limited to, fundamental

economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Alice* 134 S. Ct. at 2355–57. 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. *Id.* at 2354 ("[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.").

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 of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (internal citation omitted). If the claims are not directed to a patent-ineligible concept, the inquiry ends. *See Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017). If the concept is directed to a patent-ineligible concept, we proceed to the "inventive concept" step. For that second 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).

Alice Step 1 — Abstract Idea

Appellants generally contend the Examiner erred in asserting the claims are directed to an abstract idea. App. Br. 12. More specifically, Appellants argues, "[t]he claims do not "merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet," but instead, "the claimed solution is necessarily rooted in computer technology in order to overcome a problem

specifically arising in the realm of computer networks." App. Br. 13 (emphasis omitted).

Appellants further contend the Examiner erred because no evidence is cited to establish that the claims are abstract. App. Br. 16–17.

Appellants' argument concerning the absence of evidence supporting the § 101 rejection also does not persuade us of Examiner error. "Patent eligibility under § 101 presents an issue of law." *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340 (Fed. Cir. 2013). There is no requirement that an examiner cite evidentiary support to conclude that a claim is directed to a patent-ineligible concept, such as an abstract idea.

The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a question of law. *Rapid Litig. Mgmt. v. CellzDirect*, 827 F.3d 1042, 1047, 119 USPQ2d 1370, 1372 (Fed. Cir. 2016); *OIP Techs. v. Amazon.com*, 788 F.3d 1359, 1362, 115 USPQ2d 1090, 1092 (Fed. Cir. 2015); *DDR Holdings v. Hotels.com*, 773 F.3d 1245, 1255, 113 USPQ2d 1097, 1104 (Fed. Cir. 2014); *In re Roslin Institute (Edinburgh)*, 750 F.3d 1333, 1335, 110 USPQ2d 1668, 1670 (Fed. Cir. 2014); *In re Bilski*, 545 F.3d 943, 951, 88 USPQ2d 1385, 1388 (Fed. Cir. 2008) (*en banc*), *aff'd by Bilski v. Kappos*, 561 U.S. 593, 95 USPQ2d 1001 (2010). Thus, the court does not require "evidence" that a claimed concept is a judicial exception, and generally decides the legal conclusion of eligibility without resolving any factual issues. *FairWarning IP, LLC v. Iatric Sys.*, 839 F.3d 1089, 1097, 120 USPQ2d 1293, 1298 (Fed. Cir. 2016) (citing *Genetic Techs. Ltd. v. Merial LLC*, 818 F.3d 1369, 1373, 118 USPQ2d 1541, 1544 (Fed. Cir. 2016)); *OIP Techs.*, 788 F.3d at 1362, 115 USPQ2d at 1092; *Content Extraction & Transmission LLC v. Wells Fargo*

Bank, N.A., 776 F.3d 1343, 1349, 113 USPQ2d 1354, 1359
(Fed. Cir. 2014).

MPEP § 2106.07(a) (III).

Appellants also argue, "the claims are quite different from the closest prior art that the Examiner has been able to uncover, and thus any assertion that they recite a 'known' practice cannot be sustained." App. Br. 13.

The Examiner concludes the claims

are directed to an abstract idea of providing a reimbursement for an unused product, specifically providing a refund or credit for unused portions of a travel ticket, which is (i) a fundamental economic practice, (ii) a method of organizing human activities, (iii) an idea of itself, or (iv) a mathematical relationship or formula.

Final Act. 3–4.

In turn, Appellants argue the claims are not directed to any of these four categories of abstract ideas. App. Br. 13–15.

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, in pertinent part, a method that requires the steps of:

- (a) "retrieving . . . information regarding a travel ticket;"
 - (b) "determining . . . that a time interval . . . has elapsed,"
 - (c) "calculating . . . a residual value of the travel ticket;
- and"
- (d) "initiating . . . a refund or credit for the residual value."

Our reviewing courts have often identified abstract ideas by referring to earlier precedent, e.g., by comparing a claimed concept to the concepts previously identified as abstract ideas by the courts. *Amdocs (Israel), Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016). For example, in *Alice*, the Supreme Court identified the claimed systems and methods as describing the concept of intermediated settlement, and then compared this concept to the risk hedging concept identified as an abstract idea in *Bilski*. Because this comparison revealed "no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here", the Court concluded that the concept of intermediated settlement was an abstract idea. *Alice*, 134 S. Ct. at 2356-57. Similarly, the Federal Circuit in *Amdocs* compared the claims at issue with "eligible and ineligible claims of a similar nature from past cases" as part of its eligibility analysis. 841 F.3d at 1295–1300.

Under step one, we agree with the Examiner that the invention claimed in independent claim 1 is directed to an abstract idea, i.e., providing a reimbursement for an unused product, specifically providing a refund or credit for unused portions of a travel ticket. In agreement with the Examiner, we further conclude this is a fundamental economic practice relating to agreements between entities in performance of a financial obligation, e.g., performing or resolving a financial obligation under a contractual agreement. *See* Final Act. 3–4; Ans. 3–4; *and see buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("The claims are squarely about creating a contractual relationship — a 'transaction performance guaranty' — that is beyond question of ancient lineage []. The

dependent claims' narrowing to particular types of such relationships, themselves familiar, does not change the analysis. This kind of narrowing of such long-familiar commercial transactions does not make the idea non-abstract for section 101 purposes.") (internal citation omitted).

As the Specification discloses, "[t]his invention relates generally to a method and system for tracking tickets, and more specifically to a method and system for tracking unused electronic tickets and for providing refunds for those tickets." Spec. ¶ 2.⁵ We find this type of activity, i.e., providing a refund for an unused portion of a ticket, for example, includes longstanding conduct that existed well before the advent of computers and the Internet, and 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*.").⁶

Our reviewing court has previously held other patent claims ineligible for reciting similar abstract concepts. For example, while the Supreme

⁵ *See also* Spec. 22 ("Abstract"):

An automated method and system for refunding the unused portion of an electronic ticket are provided. In accordance with the method, an aging period is set and is added to the scheduled departure date of the issued ticket. If the scheduled departure date plus the aging date is earlier than the current date, a determination is made as to whether the ticket has been used. If the ticket has not been used, the residual value of the ticket is calculated and a refund is issued.

⁶ *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.

Court has enhanced the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, the Federal Circuit continues 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).

In addition, our reviewing court has concluded that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power*, 830 F.3d at 1353–54 (collecting information and "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category"). Similarly, "collecting, displaying, and manipulating data" is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Also, collecting and comparing known information has been determined to be an abstract idea. *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) ("Claim 1 of the #283 patent states the idea of collecting and comparing known information"). Further, a process that employs mathematical algorithms to manipulate existing information to generate additional information is abstract. *Digitech Image Techs., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). Also, more

recently, our reviewing court has also concluded that acts of parsing, comparing, storing, and editing data are abstract ideas. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018).

Appellants also imply claim 1 is patent-eligible because its practice does not preempt practice by others. App. Br. 16. We disagree because, "[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility. . . . Where a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) ("that the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract").

Further, Appellants' reliance on *DDR* (App. Br. 13) is misplaced as the recited claims do not improve the computer. In *DDR*, the claims at issue involved, *inter alia*, "web pages displays [with] at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants" (claim 1 of US 7,818,399). The Federal Circuit found the claims in *DDR* to be patent-eligible under step one of the *Alice* test because "the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *DDR Holdings*, 773 F.3d at 1257. Specifically, the Federal Circuit found the claims addressed the "challenge of retaining control over the attention of the customer in the context of the

Internet." *Id.* at 1258. In agreement with the Examiner (Ans. 8), we find the rejected claims are dissimilar to *DDR*'s web page with an active link, and the Specification does not support the view that the computer related claim elements are unconventional. *See Spec.* ¶¶ 18, 26.

Appellants generally invoke *Enfish* and *McRo* (citations, *supra*), and argue the "claims relate to an improvement to the relevant system" (App. Br. 2), and further allege "the claims 'improve computer-related technology [e.g., 'ticket tracking and refunding system'] by allowing computer performance of a function not previously performable by a computer.'" App. Br. 3. We disagree.

We disagree because the claims in *McRO* recited a "specific . . . improvement in computer animation" using "unconventional rules that relate[d] sub-sequences of phonemes, timings, and morph weight sets." *McRO*, 837 F.3d at 1302–03, 1307–08, 1314–15. In *McRO*, "the incorporation of the claimed rules, not the use of the computer," improved an existing technological process. *Id.* at 1314. Appellants do not, however, identify how claim 1 improves an existing technological process, other than to allege (App. Br. 3) it improves "ticket tracking and refunding system." *Cf. Alice*, 134 S. Ct. at 2358 (explaining that "the claims in *Diehr* were patent eligible because they improved an existing technological process").

Rather, claim 1 is directed to a method for refunding or crediting residual value for an unused portion of a travel ticket (claim 1), a process that can be carried out in the human mind and/or by use of pen and paper. *See CyberSource*, 654 F.3d at 1375. Moreover, Appellants do not direct us to any evidence that the claimed retrieving, determining, calculating, and initiating steps correspond to unconventional rules.

Therefore, in agreement with the Examiner, we conclude claim 1 involves nothing more than identifying, collecting, storing, comparing, and generating data, without any particular inventive technology — an abstract idea. *See Elec. Power Grp.*, 830 F.3d at 1354.⁷

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. *Ulramercial, 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.

⁷ Merely automating previously manual processing by using computers does not qualify as an eligibility-rejection-defeating improvement. *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044 (Fed. Cir. 2017).

Limitations referenced in *Alice* that are not enough to qualify as "significantly more" when recited in a claim with an abstract idea include, as non-limiting or non-exclusive examples: adding the words "apply it" (or an equivalent) with an abstract idea;⁸ mere instructions to implement an abstract idea on a computer;⁹ or requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.¹⁰

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 refunding or crediting residual value for an unused portion of a travel ticket into a patent-eligible application of that abstract idea. *See* Ans. 10.

The Examiner concludes:

[T]he claimed invention does not further or improve upon the technology or the technical field as merely having a general purpose device to perform the steps of the abstract idea is nothing more than having the general purpose device perform the well-understood, routine, and conventional activities already known in providing a reimbursement for an unused product, which results in the claimed invention not amounting to being "significantly more" than the judicial exception. The Examiner further notes that the decision of *DDR Holdings* does not apply as, unlike *DDR Holdings*, the claimed invention is not "deeply rooted in the technology" since: 1.) humans have, for some

⁸ *Alice*, 134 S. Ct. at 2357–58.

⁹ *Alice*, 134 S. Ct. at 2357–58, *e.g.*, simply implementing a mathematical principle on a physical machine, namely a computer (citing *Mayo*, 566 U.S. at 84–85).

¹⁰ *Alice*, 134 S. Ct. at 2359, *e.g.*, using a computer to obtain data, adjust account balances, and issue automated instructions.

time, longed been known to perform the well-understood, routine, and conventional activities in the field of providing a reimbursement for an unused product, e.g., gathering the necessary information pertaining to the specifics of the ticket to determine a refund; and 2.) the well-understood, routine, and conventional activities of the abstract idea does not change, alter, or improve upon how the technology, i.e. the computing device, fundamentally functions. The invention further fails to improve upon the technical field (providing a reimbursement for an unused product) because merely using the general purpose device to perform the well-understood, routine, and conventional activities of the providing a reimbursement for an unused product and that such use of the technology has been held to not be an "inventive concept" as the general purpose device is being used for the very purpose that such device are known to be used for, e.g. more efficient, faster, more cost-efficient, [] etc.

Ans. 10–11.

The Examiner further concludes, "[l]ooking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually. There is no indication that the combination of elements improves the functioning of a computer or improves any other technology. Their collective functions merely provide conventional computer implementation." Ans. 11.

We note the patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer*, 881 F.3d at 1368.

As evidence of the conventional nature of the claimed network components and processes, we note the Examiner's citation (Ans. 11) to Appellant's Specification in paragraphs 18 and 26. For example:

[T]he refund method in accordance with the invention is practiced by implementing various process steps on a computer 11. Computer 11 is preferably a centralized computer controlling and/or interfacing with each of the various databases.

Spec. ¶ 18.

For example, as noted above, the databases that have been referred to can be individual databases, a single central database, or databases partitioned in ways other than as illustrated in the figures. Preferably the invention is practiced through use of a single central computer which can contain all transactions for a particular client, regardless of location of that client or various departments, divisions or other segments of that client.

Spec. ¶ 26.

We agree with the Examiner that the claim limitations may be broadly but reasonably construed as reciting conventional computer components and techniques, particularly in light of Appellants' Specification, as quoted above.¹¹

¹¹ During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using "the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

With respect to the Step 2 analysis, we agree with the Examiner because, as in *Alice*, the recitation of a "method" using a "computing system" and "database" 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.").¹²

Accordingly, based upon the findings 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 65–83, not argued separately, and which fall therewith. *See Claim Grouping, supra*.

2. § 103 Rejection R2 of Claims 1 and 65–83

Issue 2

Appellants argue (App. Br. 18–21; Reply Br. 3–5) the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as being obvious over Gardner in view of the Examiner's taking of Official Notice is in error. These contentions present us with the following issue:

Did the Examiner err in finding the cited prior art in view of Official Notice teaches or suggests a method that uses a computing system to determine "a time interval for an unused segment of a trip," wherein "the

¹² Appellants merely allege, "the present claims are not directed to an abstract idea but rather an improvement to the functioning of the relevant system and, accordingly, are directed to patent-eligible subject matter." Reply Br. 3.

time interval corresponds to an aging period greater than zero days for the travel ticket and is measured starting on or after a travel date of the unused segment," as recited in claim 1?

Analysis

Appellants contend, "Gardner utterly fails to teach or suggest the use of such an 'aging period.' The Examiner even concedes this point." App. Br. 18. Appellants further argue:

The Examiner "takes Official Notice that it is notoriously old and well-known in the art of commerce for service providers to utilize the concept of refunds/credits and to further tie it to an expiration date that dictates for how long the consumer would be eligible to receive the refund/credit." Final Office Action at 20. The Examiner further takes Official Notice "that it is notoriously old and well-known in the art to provide a beginning date and an end date, i.e. time interval/aging period." *Id.* at 23.

Appellant does not concede the propriety of these alleged Official Notices, and further does not concede that (even if proper) they would have any relevance to the instant claims.

App. Br. 19.

Appellants further question the relevance of the evidence in various patent references cited by the Examiner in support of the taking of Official Notice. App. Br. 20. According to Appellants, "[n]one of these references appear to provide any support whatsoever for an 'aging period' or a 'time interval.'" App. Br. 21 (emphasis omitted).

The Examiner responds by reiterating:

[A]ppellant's arguments are, again, directed towards **Gardner** not disclosing the phrase "aging period", as well as the aging period is of a particular value, i.e. greater than zero days or at

least fifteen days. Further, contrary to the appellant's arguments, the Examiner is not conceding to **Gardner** not teaching an aging period, but teaching the value for the aging period. The Examiner asserts that this is a mischaracterization of the rejection that was provided and asserts that the Examiner's position was made very clear by the fact that "greater than zero days" was the language that was emphasized in the 103 portion of the rejection and that "greater than zero days" was substituted with *"/. . . /*" in the **Gardner** section of the rejection to make it clear that aging period is taught and not the value for the aging period.

Next, the Examiner provided several different explanations that demonstrated why Gardner does, indeed, teach an aging period, which the appellant fails to address, as well as an **Official Notice** statement, **supported by eight different patents**, in order to teach that assigning a value to an aging period is, indeed, well-known in the art, arbitrary, found in various different industries, and obvious to one of ordinary skill in the art. The Examiner asserts that the appellant has failed to address any of this, but simply states that it is unclear what **Gardner and Official Notice** are being relied on to teach.

Ans. 28.

"Furthermore, the Examiner asserts that the number of days that defines the aging period, i.e. the time period in which the consumer would be eligible for a refund, is non-functional descriptive subject matter."

Ans. 29.

The informational content of non-functional descriptive material is not entitled to weight in the patentability analysis. *See Ex parte Nehls*, 88 USPQ2d 1883, 1887-90 (BPAI 2008) (precedential); *Ex parte Curry*, 84 USPQ2d 1272 (BPAI 2005) (informative), *aff'd*, No. 06-1003 (Fed. Cir. June 12, 2006) (Rule 36); *Ex parte Mathias*, 84 USPQ2d 1276 (BPAI 2005) (informative), *aff'd*, 191 Fed. Appx. 959 (Fed. Cir. 2006).

Further, if the claimed contested data element is positively recited as: (1) actually being used to change or affect a machine function (for apparatus claims), or (2) actually being used to change or affect the manner in which a step or act is performed (for method or process claims), then such data elements are generally considered by the USPTO and PTAB to be functional descriptive material, and are given full patentable weight.

However, in this Appeal, such is not the case. In agreement with the Examiner, "what the number of days is supposed to be does not change how the determination of a time interval, i.e. the aging period, is performed. The Examiner asserts that it does not matter what the number of days is supposed to be as the same end result or performance of 'determining . . . a time interval' will still be performed the same." Ans. 17.

With respect to dependent claim 71, Appellants allege this claim "further recites that 'the aging period is at least fifteen days.' None of the art of record (neither Gardner nor the references cited as allegedly supporting Official Notice) teaches or suggests an aging period, much less an aging period of at least fifteen days." App. Br. 21. Additionally, "[t]he length of time recited by the claims is perfectly functional, in that it affects when the other recited claim limitations occur." *Id.*

The Examiner finds:

In regards to claim 71, Gardner discloses wherein the aging period is at least fifteen days (As has already been discussed above, the Examiner . . . asserts that the time period is considered to be non-functional descriptive material, a design choice, and an intended result that provides no patentable distinction with the combination of Gardner and Official Notice. One of ordinary skill in the art would have found it

obvious to make the time period any amount of time that the practitioner of the invention wants while still achieving the same predictable result, i.e. provide reimbursement for an unused segment of a ticket at a particular point in time.).

Ans. 28–29 (emphasis omitted).

In agreement with the Examiner's findings, we find the choice of an aging period of at least 15 days would have been a mere design choice and would not have been "uniquely challenging or difficult for one of ordinary skill in the art." *See Leapfrog Ent. Inc. v. Fisher-Price Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). Thus, we find choosing the aging period to be 15 days or more is simply a modification of a familiar prior art practice or act (as taught by the Examiner's Official Notice) that would have realized a predictable result. The Supreme Court has determined that the conclusion of obviousness can be based on the 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. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). The skilled artisan is "a person of ordinary creativity, not an automaton." *Id.* at 420–21.¹³

¹³ We also observe that Appellants have not imparted any special significance to the recitation of at least 15 days (or greater than zero days) in the claims. In fact, Appellants' Specification broadly discloses, "[t]he traveler or the traveler's employer sets an aging period beyond which tickets are deemed to be unused." Spec. ¶ 6. Further, "[t]he aging criteria is a period of time ranging from zero days to three hundred and sixty five days. *The aging criteria is set by the client* and establishes a criteria for determining how old a ticket must be before it is assumed that ticket will not be used. Usually the aging criteria is set at between about fifteen days and about sixty days." Spec. ¶ 11 (emphasis added). We find the italicized portion of

Therefore, based upon the findings above, 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 limitation 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 of independent claim 1, and grouped claims 65–83 which fall therewith. *See Claim Grouping, supra.*

REPLY BRIEF

To the extent Appellants *may* advance new arguments in the Reply Brief (Reply Br. 2–3) not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause (*see* 37 C.F.R. § 41.41(b)(2)), which Appellants have not shown.

CONCLUSIONS

(1) The Examiner did not err with respect to patent-ineligible subject matter Rejection R1 of claims 1 and 65–83 under 35 U.S.C. § 101, and we sustain the rejection.

(2) The Examiner did not err with respect to obviousness Rejection R2 of claims 1 and 65–83 under 35 U.S.C. § 103(a) over the cited prior art combination of record, and we sustain the rejection.

paragraph 11 above supports the Examiner's conclusion that the selection of an aging period of at least 15 days is an obvious design choice.

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DECISION

We affirm the Examiner's decision rejecting claims 1 and 65–83.

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