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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KAMAL ZAMER

Appeal 2019-002277
Application 14/206,808
Technology Center 3600

Before: JAMES R. HUGHES, CATHERINE SHIANG, and
JASON J. CHUNG, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Claims 1–15 and 21–25 are pending, stand rejected, are appealed by Appellant,¹ and are the subject of our decision under 35 U.S.C. § 134(a). *See* Final Act. 1–2.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a) (2015). Appellant identifies the real party in interest as eBay Inc. Appeal Br. 3.

² Throughout our decision we refer to Appellant’s Specification filed Mar. 12, 2014 (“Spec.”); Appeal Brief filed Sept. 25, 2018 (“Appeal Br.”); and Reply Brief filed Jan. 22, 2019 (“Reply Br.”). We also refer to the Examiner’s Final Office Action mailed Jan. 26, 2018 (“Final Act.”); and Answer mailed Nov. 21, 2018 (“Ans.”).

CLAIMED SUBJECT MATTER

The invention “generally relates to merchant physical locations, and more particularly to a service experience score system that quantifies customer service experiences at merchant physical locations.” Spec. ¶¶ 1; *see* Spec. ¶¶ 2–4, 29, and Abstract. Claims 1 (reciting a system), 7 (reciting a method), and 22 (reciting a system) are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A physical location service experience score system, comprising:

a non-transitory memory storing computer executable instructions that, when executed by one or more hardware processors, cause the service experience score system to perform a method, comprising:

[A] receiving a first sensor signal from a first beacon device through a first wireless communication system using a first wireless communication protocol, wherein the first sensor signal is based on a communication between the first beacon device and a user device through a second wireless communication system using a second wireless communication protocol, and wherein the first beacon device is located at a first physical location and is associated with a first wireless coverage area;

[B] determining a start of a user service experience when the first sensor signal is received;

[C] receiving a second sensor signal from a second beacon device through a third wireless communication system using the first wireless communication protocol, wherein the second sensor signal is based on a communication between the second beacon device and the user device through a fourth wireless communication system associated with the second beacon device using the second wireless communication protocol, and wherein the second beacon is located at a second physical location and is associated with a second wireless coverage area, and wherein at least a portion of the second

wireless coverage area overlaps with the first wireless coverage area to provide a combined coverage area;

[D] determining, based at least in part, on the second sensor signal, that a first service event has occurred subsequent to the start of the user service experience;

[E] determining an end of the user service experience when the first sensor signal is no longer received;

[F] generating a first service experience score that is based, at least in part, on:

the start of the user service experience;

the end of the user service experience; and

a second service experience score based on the first service event;

[G] generating a total service experience score based, at least in part, on the first service experience score and the second service experience score;

[H] storing the total service experience score, the first service experience score, and the second service experience score in a database associated with a client device associated with one or more of the first beacon device and the second beacon device; and

[I] generating a service experience score map on a display device that includes the total service experience score, the first service experience score and the second service experience score associated with one or more of the first physical location and the second physical location.

Appeal Br. 24–25 (Claims App.) (bracketed claim limitation designations added).

REFERENCES

The prior art relied upon by the Examiner as evidence is:

Name	Reference	Date
Sabongi et al. ("Sabongi")	US 2003/0200147 A1	Oct. 23, 2003
Takaki et al. ("Takaki")	US 2004/0224703 A1	Nov. 11, 2004
Stephens	US 2010/0267387 A1	Oct. 21, 2010
Moshfeghi	US 2013/0030931 A1	Jan. 31, 2013
Gaub et al. ("Gaub")	US 8,818,403 B1	Aug. 26, 2014 (filed Feb. 14, 2012)

REJECTIONS³

1. The Examiner rejects claims 1–15 and 21–25 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 10–15.
2. The Examiner rejects claims 1–5, 7–14, and 21–24 under 35 U.S.C. § 103(a) as being unpatentable over Sabongi, Stephens, and Takaki. Final Act. 14–28.
3. The Examiner rejects claims 6 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Sabongi, Stephens, Takaki, and Moshfeghi. Final Act. 28–30.

³ The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, e.g., to rename 35 U.S.C. § 103's subsections. Because the present application has an effective filing date after to the AIA's effective date for applications, this decision refers to the AIA version of 35 U.S.C. § 103.

4. The Examiner rejects claim 25 under 35 U.S.C. § 103(a) as being unpatentable over Sabongi, Stephens, Takaki, and Gauba. Final Act. 30–31.

ANALYSIS

Subject Matter Eligibility—35 U.S.C. § 101

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–80 (2012). “[F]or distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 573 U.S. at 217. The framework requires us first to consider “whether the claims at issue are directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If so, we then examine “the elements of [the] claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). That is, we examine the claim for an “inventive concept,” “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to

significantly more than a patent upon the [ineligible concept] itself.” *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73).

The Patent Office has published revised guidance concerning this framework and the application of § 101. USPTO’s 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter “2019 Revised Guidance”). 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, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people) (hereinafter “Step 2A, prong 1”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (hereinafter “Step 2A, prong 2”).⁴

See 2019 Revised Guidance, 84 Fed. Reg. 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. *See* 2019 Revised Guidance, 84 Fed. Reg. 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent eligible under 35 U.S.C. § 101. *See* 2019 Revised Guidance, 84 Fed. Reg. 54.

⁴ All references to the MPEP are to the Ninth Edition, Revision 08-2017 (rev. Jan. 2018).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then evaluate whether the claim provides an inventive concept. *See* 2019 Revised Guidance, 84 Fed. Reg. 56; *see also Alice*, 573 U.S. at 217–18.

For example, we 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.⁵

See 2019 Revised Guidance, 84 Fed. Reg. 56. With these principles in mind, we turn to the merits of the § 101 rejection. The Examiner rejects Appellant’s claims 21–28, 30–38, 41, and 47–53 as being directed to patent-ineligible subject matter. *See* Final Act. 4–5; Ans. 3–4. Appellant does not separately argue the claims with specificity and, instead, argues the claims together for this rejection. *See* Appeal Br. 7. Accordingly, we address the Examiner’s rejection of independent claim 21 and the claims not separately argued by Appellant as a group based on claim 21, as permitted by 37 C.F.R. § 41.37(c)(1)(iv).

Statutory Subject Matter

Claim 1 recites a “system” (*supra*). Appellant’s “system” uses a processor (“one or more hardware processors”) and a “memory” that stores “computer executable instructions,” which “when executed by [the

⁵ Items (3) and (4) are collectively referred to as “Step 2B” hereinafter and in the 2019 Revised Guidance.

processor] cause the service experience score system to perform a method” comprising a number of functions or steps. Appeal Br. 24 (Claims App.) (claim 1). Accordingly, we analyze Appellant’s system as a process, which is a statutory category of invention (subject matter) (USPTO’s Step 1).

Abstract Idea

The Examiner rejects Appellant’s claim 1 as being directed to patent-ineligible subject matter. See Final Act. 10–12; Ans. 3–11. Specifically, the Examiner concludes claim 1 and the other independent claims are directed an “idea of itself,” which is an “abstract idea[]” and the recited functionality “(collecting information, analyzing it, and displaying it . . .)” is similar to *Electric Power Group (Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)), “which are concepts held by the courts to be abstract.” Final Act. 11. The Examiner further concludes the recited functionality (“receiving, determining, . . . generating, [and] storing”) is “directed toward the abstract concept of collecting information, analyzing it, and displaying it because the collected signals are used to generate . . . service experience scores . . . then adding up the first and second service experience score[s] to get a total service experience score (e.g. analysis) and then displaying that data on a service experience score map.” Final Act. 11–12.

Appellant contends the Examiner erred in rejecting the claims as being directed to patent-ineligible subject matter. See Appeal Br. 9–13; Reply Br. 3–5. Specifically, Appellant contends, with respect to the first step of the *Alice* analysis, that the instant claims “are similar to the claims in *Thales*” (*Thales Visionix Inc. v. United States*, 850 F.3d. 1343, 1349 (Fed. Cir. 2017)) and

the claims at issue are not merely directed to the abstract idea of collecting information, analyzing the information, and displaying the information. Rather, the claims are directed to systems and methods that use signals from beacon devices positioned in and/or around a physical location of a merchant to generate service experience scores associated with the merchant.

Accordingly, Appellant[] submit[s] that the claims are not directed to an abstract idea and instead recite patent eligible subject matter.

Appeal Br. 11. Appellant also contends “the claims have been oversimplified and the Examiner fails to account for the specific requirements of the claims.” Appeal Br. 11. Appellant further contends the claims (in particular claim 1) embody a technical improvement—“claim 1 recites specific, technical features to overcome problems that arise in the realm of service experience score systems that quantify, score, and/or provide feedback regarding customer service experiences.” Appeal Br. 12. Appellant additionally contends claim 1 is (and the other pending claims are) similar to the claims in *DDR Holdings (DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)). Appeal Br. 12.

For the reasons discussed below, we conclude Appellant’s claim 1 (and the other pending claims) recites abstract ideas, these abstract ideas are not integrated into a practical application, nor do they include an inventive concept. In view of the 2019 Revised Guidance, we clarify and expand the Examiner’s reasoning as follows.

We begin our analysis by broadly but reasonably construing Appellant’s claim 1 (*see* Appeal Br. 24–25 (Claims App.)). Omitting the portions of the claim invoking use of generic technology (which are discussed separately below), claim 1 focuses on (as stated in the preamble) “[a] physical location service experience score system” that “perform[s] a

method, comprising” several functions or steps. These steps (functions) elaborate on the functionality of the service experience scoring process, and comprise “receiving” or collecting information—(A) “receiving a first sensor signal from a first beacon device through a first wireless communication system using a first wireless communication protocol” that is “based on a communication between the first beacon device and a user device through a second wireless communication system using a second wireless communication protocol,” and (C) “receiving a second sensor signal from a second beacon device through a third wireless communication system using the first wireless communication protocol” that is “based on a communication between the second beacon device and the user device through a fourth wireless communication system associated with the second beacon device using the second wireless communication protocol.” The service experience scoring process also comprises analyzing and manipulating the collected information—(B) “determining a start of a user service experience when the first sensor signal is received,” (D) “determining” “a first service event has occurred subsequent to the start of the user service experience” based on “the second sensor signal,” (E) “determining an end of the user service experience when the first sensor signal is no longer received,” (F) “generating a first service experience score “based” “on” “the start of the user service experience,” “the end of the user service experience,” and “a second service experience score based on the first service event,” and (G) “generating a total service experience score based” “on the first service experience score and the second service experience score.” The service experience scoring process further comprises storing the experience score information and displaying the experience score

information—(H) “storing the total service experience score, the first service experience score, and the second service experience score in a database,” and (I) “generating a service experience score map on a display device that includes the total service experience score, the first service experience score and the second service experience score associated with one or more of the first physical location and the second physical location.”

Apart from the use of generic technology (discussed further below), each of the limitations of claim 1 describes “collecting information, analyzing it, and displaying certain results of the collection and analysis,” where the data analysis steps are recited at a high level of generality such that they could practically be performed in the human mind.” October 2019 Update: Subject Matter Eligibility 7, available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (hereinafter “October 2019 Update”). The service experience scoring process amounts to a mental process (“idea of itself”—*see* Final Act. 11) that is very similar to *Electric Power Group*. *See Elec. Power Grp.*, 830 F.3d at 1351–54.

A person can practically perform the function of limitations B and D–G (the “determining” and “generating” steps) mentally, or by using pen and paper. Nowhere does Appellant point to specific claim limitations that distinguish over a human process. Further, the revised guidance explains that “mental processes” include acts that people can perform in their minds or using pen and paper, even if the claim recites that a generic computer component performs the acts. *See* 2019 Revised Guidance, 84 Fed. Reg. 52 n.14 (“If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim

cannot practically be performed in the mind.”) Because each of the limitations discussed above encompasses an act that people can perform in their minds or using pen and paper, claim 1 recites mental processes. Appellant’s arguments have not persuaded us otherwise. *See Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (identifying the abstract idea of collecting, displaying, and manipulating data); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1345, 1347 (Fed. Cir. 2014) (Finding the “claims generally recite . . . extracting data [and] recognizing specific information from the extracted data” and that the “claims are drawn to the basic concept of data recognition.”). Even where the analysis requires one to access and gather data, or utilize a pen and paper in the analysis, such analysis may still be an abstract mental process. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (“[E]ven if some physical steps are required to obtain information from the database . . . such data-gathering steps cannot alone confer patentability.”). Additionally, The “receiving” steps (limitations A and C), as well as the storing and displaying steps (limitations H and I) amount to extra-solution activity to the mental process.

Also, apart from the use of generic technology (discussed further below), each of the limitations of claim 1 describes activities that would normally be performed in evaluating a customer’s service experience: limitations (A)–(C) describe collecting information (sensor signals), limitations (B) and (D–G) describe analyzing the collected information to determine user experience start and end times and generate experience

scores based on thereon, and limitations (H) and (I) involve storing and displaying the information.

As stated in the Revised Guidance, subject matter relating to commerce is an example of organizing human activity, and in particular a fundamental economic practice. October 2019 Update 5; Revised Guidance, 84 Fed. Reg. 52. The interaction between a customer and a service provider (e.g., tracking a consumer entering a merchant’s physical location, paying for a purchase, and leaving a merchant’s physical location (*see* Spec. ¶ 29 (p. 4, ll. 5–23) to provide a wait time for service (*see* Spec. ¶ 3) falls under this description. Analogous authority includes, e.g., *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 911 (Fed. Cir. 2017) (tracking an object or “using a marking affixed to the outside of a mail object to communicate information about the mail object” is an abstract idea).

Appellant’s contentions (*supra*) focus on the Examiner’s purported improper interpretation of the claims (in particular claim 1). *See* Appeal Br. 11. Here, in rejecting the claims (in particular claim 1) under 35 U.S.C. § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework, consistent with the guidance set forth in the USPTO’s “2014 Interim Guidance on Patent Subject Matter Eligibility,” 79 Fed. Reg. 74618 (Dec. 16, 2014), in effect at the time the rejection was made on Jan. 26, 2018. The Examiner notified Appellant of the reasons for the rejection “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of . . . [the] application.” 35 U.S.C. § 132; *see* Final Act. 10–12. In doing so, the Examiner set forth a *prima facie* case of unpatentability such that the burden of production shifted to Appellant to demonstrate that the claims are patent eligible.

Appellant also contends the at-issue claims are similar to the claims in *Thales*, are not abstract, and that the claims (in particular claim 1) demonstrate a technical improvement. *See* Appeal Br. 11–12. Claim 1 (and the other pending claims), however, are not similar to the patent-eligible claims of *Thales*. In *Thales*, the issue involved whether the claims were directed to a mathematical concept, not a mental process or organizing human activity as in claim 1 (and the other pending claims). *See supra*; *Thales*, 850 F.3d. at 1347–49; *see also* October 2019 Update 3 (discussing *Thales*. The claims in *Thales* were found to be “directed to systems and methods that [used] inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame,” as well as “a new and useful technique for using sensors to more efficiently track an object on a moving platform,” rather than a mathematical concept. *Thales*, 850 F.3d. at 1348–49. In other words, *Thales* is directed to a new way of tracking an object utilizing common inertial sensors (in an uncommon manner).

Claim 1, however, recites no substantive limitations on how the service experience scoring process determines and generates the service experience scores (except that the data/information is received (collected) from the beacons, which is in turn provided via a network using a particular protocol). The limitations are functional in nature, or characterize various data utilized in limitations (B) and (D–G). The recited system devices (e.g., the processor, beacons, and user device) are additional elements that are not part of the abstract idea analysis.

Although Appellant contends the claims describe purported technological improvements or advances provided by service experience

scoring process, claim 1 (and the other pending claims) does not explicitly recite any specific improvements to technology, i.e., the system performing any improved processing or analysis. Claim 1, instead, simply recites receiving information and analyzing the information to generate service experience scores.

To the extent Appellant argues utilizing devices (e.g., the processor and beacons) to perform the recited functionality is not abstract, Appellant misconstrues the inquiry. As we explained *supra*, the devices are additional elements that are not part of this part of the abstract idea analysis. The relevant inquiry is whether the processes (functionality) recited in the claims (in particular claim 1) are abstract.

In summary, we conclude Appellant's claim 1 recites a judicial exception (USPTO's Step 2A, Prong 1; *see* 2019 Revised Guidance). Specifically, claim 1 recites a process for providing service experience scores—the service experience scoring process—by receiving sensor signals (information from beacons) to determine user experience start and end times and generate experience scores based thereon as discussed *supra*. The service experience scoring process consists of methods of organizing human activity and mental processes that can be practically performed in the human mind (or utilizing pen and paper) including observation, evaluation, or judgment. *See* 2019 Revised Guidance, 84 Fed. Reg. 52, 53 (listing “[c]ertain methods of organizing human activity—fundamental economic principles or practices” and “[m]ental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)” as some of the “enumerated groupings of abstract ideas” (footnote omitted)).

Practical Application

Having determined that claim 1 recites an abstract idea, we next determine, under Step 2A, Prong 2 of the 2019 Revised Guidance, whether the claims are directed to that abstract idea, or whether the claims integrate the abstract idea into a practical application of that abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. 54. In doing so, we evaluate the claim as a whole to determine whether the claim “integrate[s] the [abstract idea] into a practical application, using one or more of the considerations laid out by the Supreme Court and the Federal Circuit.” 2019 Revised Guidance, 84 Fed. Reg. 55; *see also* October 2019 Update 12 (discussing the practical application analysis). That is, we consider any additional elements recited in the claim along with the limitations that recite an abstract idea to determine whether the claim integrates the abstract idea into a practical application. *See* October 2019 Update 12.

Claim 1 recites additional elements beyond the abstract service experience scoring process (the judicial exception). The additional elements in claim 1 include the processor (“one or more hardware processors”), memory (“non-transitory memory storing computer executable instructions”), beacon devices (“first beacon device” and “second beacon device”), wireless communication systems (“first wireless communication system using a first wireless communication protocol,” “second wireless communication system using a second wireless communication protocol,” “third wireless communication system using the first wireless communication protocol,” and “fourth wireless communication system . . . using the second wireless communication protocol”), user device, database

(“a database associated with a client device”), and a display device. Appeal Br. 24–25 (Claims App.) (claim 1).

Appellant’s Specification describes “a system and method for providing a service experience score for a merchant physical location” utilizing a “plurality of beacon devices provided at the merchant physical location” that “communicate with customer devices around and throughout the merchant physical location during customer visits to the merchant physical location” to “determine a start of a user service experience” (“[f]or example, the system . . . may communicate with the user device of a customer entering the merchant physical location”), “to determine an end of the user service experience” ([f]or example, the system . . . may communicate with the user device of a customer paying a bill or leaving the merchant physical location”), and generate “service experience score[s].” Spec. ¶ 29 (*see* p. 4, ll. 5–23). The “generated service experience score[s] [are] stored in a database in association with a merchant that is associated with the merchant physical location” and the “generated and stored user service experience scores from a plurality of different customers may be used to provide any customer with . . . information regarding a possible visit to the merchant physical location” (e.g., “an overall time that may be required for their visit to the merchant physical location” or “a variety of other expected service times during a service experience”). Spec. ¶ 29 (*see* p. 4, ll. 5–23).

The Specification describes the operations and structure of the beacons and communication systems. *See* Spec. ¶ 32, and Fig. 2. Specifically the Specification describes the beacons and communication systems as generic network (computer system) components—“beacon

device 200 includes a chassis that houses a first communications system 204 such as, for example, a Wifi communications system;” “a beacon engine 206 that may be provided by instruction on a memory system” “that, when executed by a processing system” “cause[s] the processing system to perform the functions of the beacon device;” and “a second communication system 208 such as, for example, a Bluetooth® Low Energy (BLE) communication system.” Similarly, the Specification also describes the “service experience score system” (claim 1), its processor(s), and memor(ies), as well as the user (customer) device(s). *See* Spec. ¶¶ 73–77, and Fig. 8. Specifically the Specification describes the system, processor(s), memories, and user device(s) as generic computer system components—the “system 800 may comprise . . . a plurality of servers” (Spec. ¶ 73) such as “merchant device 804 . . . and/or system provider device 810[, which] may each include one or more processors, memories, and other appropriate components for executing instructions such as program code” (Spec. ¶ 75) and “the customer devices 802” (the recited user device(s)) “may be a smart phone, personal digital assistant (PDA), laptop computer, and/or other types of computing devices” (Spec. ¶ 77).

Further, Appellants Specification describes a generic computer system that can be used to implement any of the enumerated devices—“Fig. 10, [illustrates] an embodiment of a computer system 1000 suitable for implementing, for example, the customer devices 700 or 802, merchant device 804, [and] beacon devices 200, 504” (Spec. ¶¶ 84). *See* Spec. ¶¶ 84–90, and Fig. 10. Appellants Specification also describes a generic display (for displaying the service experience information)—“a display component 1014” may be, for example, a “CRT or LCD.” Spec. ¶ 85. Thus,

Appellant's Specification describes the additional elements at a high level of generality. *See* Spec. ¶¶ 73–77, 84–90, and Figs. 8, 10.

In summary, Appellant's written description does not portray the processor, beacons, communications systems, or other enumerated additional elements as anything but standard computer components. Nor does Appellant's written description portray these components as operating in a new way. Instead the written description depicts these components as generic components operating in their accustomed manner.

Accordingly, Appellant's written description shows that additional elements are generic. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986) (“[A] patent need not teach, and preferably omits, what is well known in the art.”); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1331 (Fed. Cir. 2017) (“The claimed mobile interface is so lacking in implementation details that it amounts to merely a generic component (software, hardware, or firmware) that permits the performance of the abstract idea, i.e., to retrieve the user-specific resources.”).

None of these additional elements, whether taken alone or in the context of the claims as a whole, integrate the judicial exception into a practical application. In particular, the recited limitations including the additional elements may improve the mental process and fundamental economic practice of providing service experience scores, but do not describe an improvement in the functioning of a computer, or an improvement to other technology or technical field. *See Revised Guidance*, 84 Fed. Reg. 55.

Appellant contends claim 1 (and the other pending claims) provides a technical improvement similar to the claims in *DDR Holdings*. See Appeal Br. 12–13. In other words, Appellant contends the claims recite a technological improvement that amounts to more than simply utilizing a computer as a tool to accomplish the service experience scoring process.

Appellant’s contentions correspond to the reasoning in MPEP § 2106.05(a)–(c), where additional elements integrate the judicial exception into a practical application. We, however, disagree with Appellant’s contentions. Appellant’s additional elements do not apply or use the service experience scoring process (the judicial exception) in a manner that imposes a meaningful limit on the judicial exception, such that it is more than a drafting effort designed to monopolize the exception. See *Alice*, 573 U.S. at 221–24 (citing *Mayo*, 566 U.S. at 78–85). Rather, Appellant’s claim recites generic computer elements (e.g., the processor and beacons) that are utilized as tools to carry out the collection of information and information analysis to determine user experience start and end times and generate experience scores as discussed *supra*. Utilizing computers as tools to perform common data information analysis and data collection functions that can be mental processes (an abstract idea) does not impose a meaningful limit on the abstract idea. See MPEP § 2106.05(f); see also *Alice*, 573 U.S. at 223 (Finding “if [the] recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer that addition cannot impart patent eligibility.”) (quotations and citations omitted).

Appellant’s claim 1 (and the other pending claims) can be distinguished from patent-eligible claims such as those in *McRO*, *Enfish*, *BASCOM*, and *DDR Holdings* that are directed to “a specific means or

method that improves the relevant technology” (*McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016)), or “a specific improvement to the way computers operate” (*Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016)), solving a technology-based problem (*BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016)), or a method “rooted in computer technology in order to overcome a problem specifically arising in the realm of computer [technology]” (*DDR Holdings*, 773 F.3d at 1257). Contrary to Appellant’s arguments, claim 1 is not a technological improvement or an improvement in a technology. Appellant’s claim 1 does not “improve the functioning of the computer itself” or “any other technology or technical field.” *Alice*, 573 U.S. at 225. Nor does it provide a technological solution to a technological problem. *See DDR Holdings*, 773 F.3d at 1257; MPEP § 2106.05(a). Appellant fails to explain sufficiently and persuasively how the instant claim(s) are directed to an improvement in the way computers operate, nor has Appellant identified any technical advance or improvement or specialized computer components. *See Appeal Br.* 12–13.

In summary, “the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *Elec. Power Grp.*, 830 F.3d at 1354; *see also* MPEP § 2106.05(f) (instructing Examiners to consider “[w]hether the claim invokes computers or other machinery merely as a tool to perform an existing process” in determining whether the claim recites mere instructions to apply the exception) (cited in 2019 Revised Guidance, 84 Fed. Reg. 55,

n.30) (emphasis omitted). Thus, we conclude the claims are directed to an abstract idea that is not integrated into a practical application.

Inventive Concept

Having concluded Appellant’s claims are directed to an abstract idea under the 2019 Revised Guidance (Step 2A analysis), we consider whether claim 1 has an inventive concept, that is, whether the claim has additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). As discussed above, this requires us to evaluate whether the additional claim elements add “a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field” or “simply append[] well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality.” 2019 Revised Guidance, 84 Fed. Reg. 56.

The Examiner determined that Appellant’s claim 1 (and the other pending claims)

as a whole, do not amount to significantly more than the abstract idea itself. This is because the claims do not affect an improvement to another technology or technical field; the claims do not amount to an improvement to the functioning of a computer itself; and the claims do not move beyond a general link of the use of an abstract idea to a particular technological environment. The claims merely amount to the application or instructions to apply the abstract idea using a computer and generic hardware/software, and is considered to amount to nothing more than requiring a computer workstation and generic hardware/software to merely carry out the abstract idea itself.

Ans. 6; *see* Final Act. 12–13; Ans. 4–11.

Appellant does not address explicitly which additional elements are not well-known, routine, or conventional, or how the additional elements perform functions that are not well-known, routine, and conventional with respect to the second step of the *Alice* analysis. Appellant does, however, contend claim 1 (as well as the other pending claims) should be upheld under the Step 2B analysis. Appeal Br. 11; *see* Appeal Br. 11–13. Specifically, Appellant contends the Examiner “oversimplified” the claims (Appeal Br. 11), and “claim 1 recites specific, technical features to overcome problems that arise in the realm of service experience” (Appeal Br. 12), i.e., a technical improvement similar to the claims in *DDR Holdings*. Appeal Br. 11–13. Appellant also contends “the Examiner fails to provide support for the allegation that the additional elements in the claims represent well-known, routine, and conventional functions.” Appeal Br. 13 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)).

In the Reply Brief, Appellant contends claim 1 “recites specific, technical features to overcome problems that arise in the realm of service experience score systems that quantify, score, and/or provide feedback regarding customer service experiences” (Reply Br. 7); that “the claims add specific limitations or combinations of limitations that are not well-understood, routine, conventional activities in the field of service experience score systems” (Reply Br. 7); “the present invention provides a variety of benefits to merchants and/or customers” (Reply Br. 7); and “the claims are directed towards processing that amounts to significantly more than mere instructions performed by a general purpose computer” (Reply Br. 8), similar to the claims in *DDR Holdings*. *See* Reply Br. 6–8. Appellant also reiterates the argument that the “Examiner does not provide express written

support” that “the additional elements . . . are well-known, routine, and conventional.” Reply Br. 8.

Appellant fails to persuade us of error in the Examiner’s rejection with respect to the second *Alice* step (USPTO’s Step 2B). We agree with the Examiner that Appellant’s claim 1 (as well as the other pending claims) does not evince an “inventive concept” that is significantly more than the abstract idea itself. In particular, Appellant fails to explain how the additional elements (*supra*) add specific limitations beyond the judicial exception that are not well-understood, routine, and conventional in the field.

As previously discussed, claim 1 merely recites additional non-abstract elements (processor(s), beacons, communications systems user device(s), database(s), and display device(s)) that perform the service experience scoring process. The record supports the Examiner’s findings (*see* Final Act. 12–13; *see also* Ans. 4–11) that the additional elements, individually and as an ordered combination, are generic computer components that carry out common information collection and analysis functions recited in the service experience scoring process (the abstract idea), and that the additional elements are well-understood, routine, and conventional, specified at a high level of generality. *See, e.g.*, Spec. ¶¶ 73–77, 84–90; *see also* Revised Guidance, 84 Fed. Reg. 56.

Such conventional computer processes operating on conventional computer hardware “do not alone transform an otherwise abstract idea into patent-eligible subject matter.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings*, 773 F.3d at 1256). Further, generically claimed elements of processor(s), memories, and program instructions have been found to be no more than well-understood,

routine, and conventional activity in the context of gathering, assembling, and analyzing information. *See, e.g., Berkheimer*, 881 F.3d at 1370 (“These conventional limitations of claim 1, combined with limitations of analyzing and comparing data and reconciling differences between the data amount to no more than performing the abstract idea of parsing and comparing data with conventional computer components.”).

To the extent that Appellant argues that the purported technical improvements and benefits of the service experience score system as a whole (the service experience scoring process (the abstract idea) in conjunction with the additional elements) provide significantly more than the abstract idea, we are not persuaded. *See* Appeal Br. 11–13; Reply Br. 6–8. The purported benefits and improvements—e.g., that “the service experience scores may provide a customer with a breadth of information . . . including an overall time that may be required for their visit to the merchant physical location,” or that the “mapped service experience scores may be used to assist customers in selecting between different merchant physical locations” (Appeal Br. 12–13; Reply Br. 7–8)—flow from the abstract idea and not the additional elements. That is, other than using generic technology, the purported benefits and improvements are elaborations on the basic abstract idea itself. “It is clear from *Mayo* that the ‘inventive concept’ cannot be the abstract idea itself.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1359 (Fed. Cir. 2018).

Appellant also fails to persuade us that the Examiner did not support the determination that the additional elements are well-known, routine, and conventional. The Examiner provides citations to case precedent to support the determination—*see, e.g.,* Final Act. 12 (citing *Electric Power Group*):

displaying/presenting data (references in Electric Power Group p. 9-10) have been identified as well-known, routine, and conventional steps/functions For example[,] . . . [the claims] present non-transitory memory, processors, storage devices, user device, database, a first and second communication system, first/second sensor signals, display device, and first/second beacon devices; however, these elements merely facilitate the claimed functions at a high level of generality and they perform conventional functions.

Final Act. 12 (citing *Elec. Power Grp.*, 830 F.3d at 1355 (“[S]electing information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes.”)). The Examiner also provides citations to Appellant’s Specification to support the determination. *See, e.g.*, Ans. 9 (citing Spec. ¶ 97 (“mere instructions to implement an abstract idea on a general computer[] (as disclosed in Paragraph 0097 — ‘software identified herein may be implemented using one or more general purpose or specific purpose computers and/or computer systems’ of Appellant’s [S]pecification) is insufficient for qualifying as ‘significantly more.’”)).

“The second step of the *Alice* test is satisfied when the claim limitations ‘involve more than performance of []well-understood, routine, [and] conventional activities previously known to the industry.’”

Berkheimer v. HP Inc., 881 F.3d 1360, 1367 (Fed. Cir. 2018) (quoting *Content Extraction*, 776 F.3d at 1347–48 and *Alice*, 573 U.S. at 225).

“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.”

Berkheimer, 881 F.3d at 1369; *see* 2019 Revised Guidance, 84 Fed. Reg. 56.

Accordingly, we find the Examiner has supported the finding that that the additional elements are well-known, routine, and conventional, and we

agree with the Examiner (Final Act. 12–13; Ans. 4–11) that the Additional Elements (*supra*) are well-known, routine, and conventional. The Examiner has provided support from categories 1 and 2 (below) of the four categories of information required by the USPTO’s guidance in its *Berkheimer* Memo:⁶

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s)
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s)
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s)

Berkheimer Memo at 3–4.

For at least the reasons above, Appellant has not persuasively shown the additional elements amount to significantly more than the abstract idea when considered either individually or as a combination, and we are not persuaded of Examiner error in the rejection of claim 1 under 35 U.S.C. § 101. Thus, we sustain the Examiner’s rejection under 35 U.S.C. § 101 of independent claim 1, independent claims 7 and 22, and dependent claims 2–

⁶ Memorandum from Robert W. Bahr, entitled “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*),” dated April 19, 2018 (“*Berkheimer* Memo”). The *Berkheimer* Memo is available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF> (last visited Feb. 25, 2019).

6, 8–15, 21, and 23–25, which depend from claims 1, 7, and 22, respectively, and which were not argued separately with specificity.

Obviousness Rejections of Claims 1–5, 7–14, and 21–24

The Examiner rejects independent claim 7 (as well as independent claims 1 and 22, and dependent claims 2–5, 8–14, 21, 23, and 24) over Sabongi, Stephens, and Takaki. *See* Final Act. 14–21; Ans. 12–15. Appellant contends Sabongi, Stephens, and Takaki do not teach the disputed limitations of claims 1 and 7. *See* Appeal Br. 13–18; Reply Br. 8–10. Specifically, Appellant contends, *inter alia*, that Stephens does not “teach[] or suggest[] receiving first and second sensor signals from first and second beacon devices through wireless communication systems using a first wireless communication protocol, where the first and second signals are based on communications between the first and second beacon devices and a user device through wireless communication systems using a second wireless communication protocol.” Appeal Br. 16–17.

We agree with Appellant that the Examiner-cited portions of Stephens (in combination with Sabongi and Takaki) do not teach “receiving a first sensor signal from a first beacon device through a first wireless communication system using a first wireless communication protocol wherein the first sensor signal is based on a communication between the first beacon device and a user device through a second wireless communication system using a second wireless communication protocol” as recited in claim 1 (Appeal Br. 24 (Claims App.)). *See* Appeal Br. 16–17; Reply Br. 8–9. The Examiner-cited portions of Stephens may disclose different protocols for different embodiments—Stephens ¶ 7 discusses 3GPP (3rd generation protocol) in the Background of the Invention, and Stephens ¶ 26 discusses

GSM LTE (GSM is technically a 3rd generation protocol, but LTE is an evolutionary (4th generation) protocol for data communication) as an embodiment of Stephen’s invention. *See* Final Act. 17–20 (citing Stephens ¶¶ 7, 26, 28, 40, 42). The Examiner-cited portions of Stephens also disclose cell overlap and handover control. *See* Final Act. 17–20 (citing Stephens ¶¶ 34–36, 44–46, 48, 50–52, 62, 75, 76). But, even if different communication protocols are described by Stephens, the Examiner-cited portions of the reference do not teach multiple communication systems each utilizing different communication protocols to receive signals. Rather, Stephens simply teaches different base stations having distinct cell coverage that overlap one another. *See* Stephens ¶¶ 34–36, and Fig. 2. The Examiner’s interpretation of Stephens—“each of the seven stations has a different communication protocol because they cover different areas and come from different/separate beacon devices” (Ans. 13)—is unreasonably broad and is not consistent with the reference itself (the base stations all use GSM (*see* Stephens ¶¶ 33, 40)), nor Appellant’s Specification (protocols for different communication systems (networks) include Wifi and BLE (*see* Spec. ¶ 32 and Fig. 2)).

Nowhere does Stephens teach different networked devices comprising different communication systems that communicate using distinct and different communication protocols as required by claim 1 and 7. *See* Spec. ¶ 32. The Examiner does not explain sufficiently how the cited portions of Stephens (in combination with Sabongi and Takaki) at least suggest the disputed features.

Consequently, we are constrained by the record before us to find that the Examiner erred in finding that the combination of Sabongi, Stephens,

and Takaki render obvious Appellant's claims 1 and 7. Independent claim 22 includes limitations of commensurate scope. Claims 2–5, 8–14, 21, 23, and 24 depend from and stand with claims 1, 7, and 22, respectively.

Obviousness Rejection of Claims 6, 15, and 25

The Examiner rejects claims 6 and 15 over Sabongi, Stephens, Takaki, and Moshfeghi. *See* Final Act. 28–30. The Examiner also rejects claim 25 over Sabongi, Stephens, Takaki, and Gauba. *See* Final Act. 30–31. The Examiner does not suggest, and we do not find, that the additional cited references (Moshfeghi or Gauba) cure the deficiencies of Stephens (in combination with Sabongi and Takaki) (*supra*). Therefore, we do not sustain the Examiner's obviousness rejections of dependent claims 6, 15, and 25 for the same reasons set forth for their respective base claims (*supra*).

CONCLUSION

For the reasons discussed above, we determine that claims 1–15 and 21–25 are directed to an abstract idea and do not demonstrate an inventive concept. We also determine that claims 1–15 and 21–25 are not obvious in view of the cited prior art.

Appellant has not shown that the Examiner erred in rejecting claims 1–15 and 21–25 under 35 U.S.C. § 101. Appellant has shown that the Examiner erred in rejecting claims 1–15 and 21–25 under 35 U.S.C. § 103. We therefore affirm the Examiner's rejection of claims 1–15 and 21–25 because we sustain at least one ground of rejection for each of claims 1–15 and 21–25. *See* 37 C.F.R. § 41.50(a)(1) (“The affirmance of the rejection of a claim on any of the grounds specified constitutes a general affirmance of the decision of the examiner on that claim.”).

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1-15, 21-25	101	Patent-Eligible Subject Matter	1-15, 21-25	
1-5, 7-14, 21-24	103	Sabongi, Stephens, Takaki		1-5, 7-14, 21-24
6, 15	103	Sabongi, Stephens, Takaki, Moshfeghi		6, 15
25	103	Sabongi, Stephens, Takaki, Gauba		25
Overall Outcome			1-15, 21-25	

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