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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIK G. HADDEN, JASON B. RASKIN, JONATHAN M. VAN KEULEN, KUOCHUN CHIN, and STEPHEN M. LOTTERMOSER

Appeal 2019-000304
Application 13/975,047
Technology Center 3600

Before JASON V. MORGAN, SHARON FENICK, and RUSSELL E. CASS, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Introduction

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 5, 6, 8, 9, and 17–32. Claims 1–4, 7, and 10–16 are canceled. Appeal Br. 13–15. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party-in-interest as Apple Inc. Appeal Br. 3.

Summary of the disclosure

Appellant's claimed subject matter relates to

generating interactive floor maps for displaying the layout of a retail store are provided. The interactive floor map can display the layout of a store based on events occurring in the future. If an event results in a change in the layout of the store, an employee of the store can preview the changes to the store as of the event date, prior to the occurrence of the event.

Abstract.

Representative claim (*key limitations emphasized*)

5. A method for managing a plurality of retail stores, the method comprising:

for each physical retail store of a plurality of physical retail stores:

generating, at a central server, first interactive floor map data that identifies a first arrangement of a plurality of products, the first arrangement indicating, for each product of the plurality of products, a first physical location at which the product is to be displayed in the physical retail store; and

wirelessly transmitting, by the central server, the first interactive floor map data to a [] destination associated with the physical retail store, the destination including an in-store server or an in-store device physically located in the physical retail store;

wirelessly receiving, by the central server, event data that includes:

information about an event; and

an effective date and time at which the event is to occur; and

for each physical retail store of the plurality of physical retail stores:

identifying *spatial information for the physical retail store that is indicative of an area, dimension or shape of the physical retail store*;

generating, after the event data is received and by the central server, *based on the information about the event and based on the spatial information, second interactive floor map data for the physical retail store that identifies a second arrangement of the plurality of products, the second arrangement indicating, for each product of the plurality of products, a second physical location at which the product is to be displayed in the physical retail store as of the effective date and time*, wherein the first physical location is different than the second physical location for at least one product of the plurality of products, wherein the second interactive floor map data for a first physical retail store of the plurality of stores is different than the second interactive floor map data for a second physical retail store of the plurality of stores, *wherein the second interactive floor map data includes at least part of the information about the event, and wherein the second interactive floor map data is configured to be presented in an interface that responds to an input corresponding to a selection of the event from amongst multiple events by presenting at least part of the second interactive floor map data*;

determining a transmission time for the physical retail store based on the effective date and time and a time zone associated with a physical store location of the physical retail store, the transmission time being before the effective date and time; and

wirelessly transmitting, by the central server and at the transmission time for the physical retail store, at least part of the second interactive floor map data to the destination associated with the physical retail store in advance of the effective date and time.

The Examiner's rejections and cited references

The Examiner rejects claims 5, 6, 8, 9, and 17–32 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–5.

The Examiner rejects claims 5, 6, 8, 9, and 17–32 under 35 U.S.C. § 103 as being unpatentable over Siotia et al. (US 2010/0070365 A1; published Mar. 18, 2010) ("Siotia"), Soon-Shiong (US 2014/129393 A1; published May 8, 2014), and Riley et al. (US 2009/0043676 A1; published Feb. 12, 2009) ("Riley"). Final Act. 5–10.

PRINCIPLES OF LAW

To constitute patent-eligible subject matter, an invention must be a "new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof." 35 U.S.C. § 101. There are implicit exceptions to the categories of patentable subject matter identified in 35 U.S.C. § 101, including: (1) laws of nature; (2) natural phenomena; and (3) abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014). The U.S. Supreme Court has set forth a framework for distinguishing patents with claims directed to these implicit exceptions "from those that claim patent-eligible applications of those concepts." *Id.* at 217 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The evaluation follows a two-part analysis: (1) determine whether the claim is *directed to* a patent-ineligible concept, e.g., an abstract idea; and (2) if so, then determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to *significantly more* than the patent-ineligible concept itself. *See id.* at 217–18.

"[A]ll 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. We "'must be careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (quoting *In re TLI Commc'ns LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

Earlier this year, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of the two-part analysis for patent subject matter eligibility. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) ("Revised Guidance"); *see also* USPTO, *October 2019 Update: Subject Matter Eligibility*, available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (Oct. 17, 2019). Under that guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (*see id.* at 54 (step 2A, prong one)); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see id.* at 54–55 (step 2A, prong two); MPEP §§ 2106.05(a)–(c), (e)–(h)).

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

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

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Revised Guidance, 84 Fed. Reg. 56.

ANALYSIS

Revised Guidance step 2A, prong one

In rejecting claim 5 as being directed to patent-ineligible subject matter, the Examiner determines that claim 5 is "directed to retail scheduling which is considered to be an abstract idea inasmuch as such activity is considered . . . a method of organizing human activity." Final Act. 3. That is, the Examiner determines that claim 5 recites certain methods of organizing human activity in the form of commercial activity (i.e., a marketing or sales activity). *See* Revised Guidance, 84 Fed. Reg. 52.

Appellant argues the Examiner erred because the claimed method "facilitates tracking and anticipating shifts to the floor plan data as well as selectively assessing changes associated with particular events and/or products." Appeal Br. 7 (citing Spec. ¶¶ 33–34, Figs. 3A–B, 4). Appellant further argues that "by determining floor map data and transmission times for individual stores, the system can benefit from various efficiencies of

using of a centralized system (e.g., data consistency and reduced total processing), while customizing transmissions to account for variations across a distributed network." *Id.* at 7–8 (citing Spec. ¶ 20). Thus, Appellant contends, the Examiner's determinations do not "precisely identify[] an abstract idea." Reply Br. 3.

Appellant's arguments are unpersuasive because the Examiner's determination is supported by the recitations of claim 5, which include: (1) "generating . . . first . . . floor map data" describing a first planned arrangement for a plurality of products in each of a plurality of retail stores; (2) transmitting first floor map data to each respective store; (3) responding to received event data by "generating . . . second . . . floor map data" describing a second, different planned arrangement for the plurality of products; and (4) transmitting, in advance of the event, second floor map data to each respective store. That is, claim 5 recites steps for centralized planning of how to arrange (i.e., how to market) goods in a plurality of stores.

Developing marketing plans centrally (rather than, e.g., at individual stores) represents an abstract idea in the form of certain methods of organizing human activity (i.e., commercial marketing or sales activity). *See* Revised Guidance, 84 Fed. Reg. 52 ("certain methods of organizing human activity" have been identified as abstract ideas include "commercial or legal interactions," such as "advertising, marketing or sales activities"). *Cf. In re Ferguson*, 558 F.3d 1359, 1364 (Fed. Cir. 2009) (claimed method of "organizing business or legal relationships in the structuring of a sales force (or marketing company)" not patent-eligible); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (receiving

payment locally for items ordered remotely not patent-eligible); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1344 (Fed. Cir. 2018) ("providing someone an additional set of information without disrupting the ongoing provision of an initial set of information is an abstract idea").

Revised Guidance step 2A, prong two

> Appellant contends the Examiner erred because:
>
> As in *Core Wireless*[2], the independent claims in the present application include limitations that indicate a particular manner of generating a limited set of information. For example, the second interactive floor map data identifies physical locations for products to be displayed (identified based on spatial information of a particular physical retail store) and information about an event. Further as in *Core Wireless*, this information facilitates improved interfaces that allow a user to more quickly access desired data.

Appeal Br. 8. That is, "each 'interactive floor map provides the ability to track and visualize the store layouts associated with multiple events.'" *Id.* at 9 (quoting Spec. ¶ 33); *see also id.* at 7–8 (further citing Spec. ¶¶ 20, 34, Figs. 3A–B, 4). Thus, Appellant argues, claim 5 includes additional recitations "that extend significantly beyond 'retail scheduling'. Specifically, the independent claims relate to (1) responding to event data; (2) generating ***interactive*** floor map data for ***individual floors***; and (3) identifying transmission times for ***individual stores***." Reply Br. 3.

Appellant's arguments are pertinent to the question of whether claim 5 includes additional recitations that integrate the underlying certain methods of organizing human activity into a patent-eligible practical application. *See*

[2] *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1359 (Fed. Cir. 2018).

Revised Guidance, 84 Fed. Reg. 54–55. We agree, however, with the Examiner that in this case, unlike the patent-eligible improved user interface of *Core Wireless*, the claimed "details related to what the data comprises are abstract and do not improve the functioning of an interface or a computer." Ans. 5.

The patent-eligible user interface in *Core Wireless* represented "a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods." 880 F.3d at 1363. The claimed improvement addressed "deficits relating to the efficient functioning of the computer, requiring a user 'to scroll around and switch views many times to find the right data/functionality.'" *Id.* (quoting Martyn (US 8,434,202 B2; issued May 7, 2013), col. 1, ll. 47–49). That is, the patent-eligible claim in *Core Wireless* included "[a]n additional element reflect[ing] an improvement in the functioning of a computer." Revised Guidance, 84 Fed. Reg. 55; *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) (differentiating between claims focused on an improvement in computer capabilities and claims that merely invoke computers as tools).

Here, no comparable improvements in the functioning of a computer are evident. The Specification discloses that an "interactive floor map provides the ability to track and visualize the store layouts associated with multiple events" such that an employee can "interact with the floor plan as part of planning for the layout change that may be needed." Spec. ¶ 33. The information used to generate the interactive floor maps can "be centrally tracked and managed to generate a 'global' view of the events for each store thereby giving the employees of the store a preview to the changes that may

be needed for the store." *Id.* ¶ 34. Such features merely use computers as a *tool* and do not improve the functioning of the computer itself. A broad but reasonable interpretation of the claimed features, even when read in light of the Specification, shows that they are functionally equivalent to non-technological solutions such as keeping a binder of floor maps that are indexed by date and sub-indexed by floor (or indexed by floor and sub-indexed by date). The existence of such non-technological analogs shows that claim 5 merely recites elements that "generally link the use of a judicial exception to a particular technological environment or field of use." Revised Guidance, 84 Fed. Reg. 55; *cf. DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (a claimed solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks" was directed to patent-eligible subject matter). Therefore, claim 5 does not have additional elements that integrate the underlying certain methods of organizing human activity into a patent-eligible practical application.

Revised Guidance step 2B

The Examiner determines that claim 5 does not have additional recitations that add significantly more to the underlying patent-ineligible abstract idea so as to transform claim 5 into a patent-eligible claim. *See* Final Act. 4–5. In particular, the Examiner determines that the additional recitations represent "generic computer [technologies] with functionalities which are well-understood, routine, and conventional activities." *Id.* at 4; *see also* Ans. 4 ("the claims amount to an equivalent of mere instructions to apply the abstract idea on a generic computer").

Appellant contends the Examiner erroneously "failed to provide any . . . factual determination" to support the determination that claim 5 recites elements that are well-understood, routine, and conventional. Reply Br. 3 (citing USPTO Memorandum of April 19, 2018, "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)," available at https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF). The Specification, however, provides broad, generic disclosures of the computer technologies and network environments that could be used in carrying out the claimed method, referring to several of them by the names of known standards. *See, e.g.*, Spec. Figs. 1, 8, 9, ¶¶ 45, 48, 52, 53, 55.

Moreover, we are unable to ascertain any inventive concept that arises out of the recitations of claim 5, when read as an ordered combination, that transforms the underlying abstract idea into a patent-eligible invention. *See BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). Thus, the evidence of record supports, and we agree with, the Examiner's determination that claim 5 does not have additional recitations that add significantly more to the underlying certain methods of organizing human activity.

Accordingly, we sustain the Examiner's 35 U.S.C. § 101 rejection of claim 5, and of claims 6, 8, 9, 17–32, which Appellant does not argue separately.

35 U.S.C. § 103

In rejecting claim 5 as obvious, the Examiner finds that Soon-Shiang's dynamic planograms teach or suggest:

> generating . . . based on the information about the event and based on the spatial information [indicative of an area, dimension or shape of a physical store], second interactive floor map data for the physical retail store that identifies a second arrangement of the plurality of products, the second arrangement indicating, for each product of the plurality of products, a second physical location at which the product is to be displayed in the physical retail store as of the effective date and time

Final Act. 6–7 (citing Soon-Shiong ¶¶ 71–72); Ans. 5–6 (further citing Soon-Shiong ¶¶ 15–16, 65–66, 74, Fig. 9A).

Appellant contends that the Examiner erred because, rather than teaching or suggesting the claimed use of spatial information about a *physical* retail store and identification of an arrangement of products to be displayed as of an effective date and time, Soon-Shiong merely discloses a planogram that "is generated ***based on*** '***rules*** governing absolute or relative placement of products in slots, rules governing planogram behavior based on triggering criteria . . . , condition rules . . . , or other rules'" and "is generated ***for a*** '***virtual marketplace***.'" Appeal Br. 10 (citing Soon-Shiong ¶¶ 10, 42, 75). Appellant also argues Soon-Shiong's "***arrangement*** of product representations on the virtual shelves can be ***based on*** '***a time, a location, a news event, a temperature, a fee, a trend, a weather condition, a prior purchase, a user preference, a category, or any other event or condition***,'" but that "an '***association between the planogram and a future event is not disclosed***.'" *Id.* at 11 (citing Soon-Shiong ¶ 76).

Appellant's arguments are unpersuasive because Soon-Shiong teaches dynamic planograms for use in physical stores. *See* Soon-Shiong Fig. 9A (illustrating a planogram on the interface of device 915 reflecting the content of real-world shelf 923); *see also id.* Fig. 9B (illustrating device 915

displaying virtual shelf 921 depicted as being placed in an otherwise unusable aisle next to real-world shelf 923). Soon-Shiong's rules governing planogram behavior (e.g., the arrangement of products to display) include the use of location (e.g., where the planogram is being displayed) as triggering criteria. Soon-Shiong ¶ 75. That is, Soon-Shiong's dynamic planogram rules specify products to display—even if only on a device—at particular locations of a physical store. Moreover, as Appellant acknowledges, these rules also include the use of time and events as triggering criteria. Appeal Br. 11 (citing Soon-Shiong ¶ 76); *see also, e.g.*, Soon-Shiong ¶ 15 ("dynamic planograms can be configured to . . . modify . . . representations upon triggering of an event").

The Examiner also finds that Soon-Shiong's dynamic planograms teach or suggest:

> wherein the second interactive floor map data includes at least part of the information about the event, and wherein the second interactive floor map data is configured to be presented in an interface that responds to an input corresponding to a selection of the event from amongst multiple events by presenting at least part of the second interactive floor map data

Final Act. 7 (citing Soon-Shiong ¶¶ 36, 75–76).

Appellant contends the Examiner erred because Soon-Shiong fails to teach or suggest:

- the second interactive floor map data ***includes*** at least part of the ***information about the event*** [that is to occur];
- the second interactive floor map data is configured to be presented in an interface that ***responds to an input corresponding to a selection of the event [that is to occur]***; or
- the second interactive floor map data is configured to be presented in an interface that ***responds to an input***

> ***corresponding to a selection of the event*** from amongst multiple events ***<u>by representing at least part of the second interactive floor map data</u>***

Appeal Br. 11 (emphasis, italicization, and bracketing in original).

Appellant's arguments are unpersuasive because, as the Examiner correctly notes, the language "that is to occur" is not recited. Ans. 6. Moreover, the Examiner correctly notes that Soon-Shiong's "planogram is capable of changing based on time or triggering conditions." *Id.*; *see also* Soon-Shiong ¶ 72 ("a dynamic planogram is considered to be a planogram capable of changing with time or changing based on triggering conditions"). Thus, Appellant's arguments fail: (1) to distinguish the claimed "information about the event" from a dynamic planogram rule that includes an event as triggering criteria and (2) to distinguish "an input corresponding to a selection of the event" from execution of a rule when the event occurs.

For these reasons, Appellant's arguments do not persuasively distinguish the disputed recitations from the teachings and suggestions of Soon-Shiong. Accordingly, we sustain the Examiner's 35 U.S.C. § 103 rejection of claim 5, and of claims 6, 8, 9, 17–32, which Appellant does not argue separately.

CONCLUSION

Claims Rejected	35 U.S.C. §	References/Basis	Affirmed	Reversed
5, 6, 8, 9, 17–32	101	Eligibility	5, 6, 8, 9, 17–32	
5, 6, 8, 9, 17–32	103	Siotia, Soon-Shiong, Riley	5, 6, 8, 9, 17–32	
Overall Outcome			5, 6, 8, 9, 17–32	

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

AFFIRMED