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Muncy, Geissler, Olds & Lowe, P.C./QUALCOMM
4000 Legato Road, Suite 310
Fairfax, VA 22033

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SORKOWITZ, DANIEL M

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHAND MEHTA and ROBERT C. LEWIS

Appeal 2017-003421
Application 12/470,476
Technology Center 3600

Before ERIC B. CHEN, MELISSA A. HAAPALA, and
KARA L. SZPONDOWSKI *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–58. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ Appellants identify the real party in interest as QUALCOMM Incorporated. App. Br. 3.

STATEMENT OF THE CASE

Appellants' invention is directed to a method and system for generating a user profile based on user location history tracked via a mobile device. Spec. ¶ 2. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method of generating a user profile based on location fixes, comprising:

receiving, at a communications device, a set of location fixes representing one or more locations of a mobile device;

combining, by the communications device, the set of location fixes to generate a user location history for a user of the mobile device;

identifying, by the communications device, a set of visited locations in the user location history;

sorting, by the communications device, the set of visited locations by at least dwell-time of the mobile device at each of the set of visited locations to identify a set of significant locations to the user of the mobile device; and

generating, by the communications device, a user profile for the user of the mobile device based at least on the set of significant locations.

REJECTIONS

Claims 1–58 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1–14, 16, 17, 19, 21, 22, 24, 26, 27, 29, 31, 32, 34, 36, 37, 39, 42–44, 46, 48, 49, 51–53, and 56–58, stand rejected under 35 U.S.C.

§ 102(b) as being anticipated by DeWolf et al. (US 2002/0111172 A1; published Aug. 15, 2002).²

Claims 15, 20, 25, 30, 35, 40, 41, 47, 54, and 55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of DeWolf and Lau et al. (US Patent 6,975,941 B1; issued Dec. 13, 2005) (“Lau”).

Claims 18, 23, 28, 33, 38, and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of DeWolf, Doherty et al. (US 2008/0125959 A1; published May 29, 2008) (“Doherty”), and Reference “U” on PT0-892, *AMERICAN TIME USE SURVEY—2005 RESULTS ANNOUNCED BY BLS*, News Bureau of Labor Statistics, US Dept. of Labor (2005), USDL 06-1276, p 2.

ANALYSIS

35 U.S.C. § 101 Rejections

Alice Corp. Pty. Ltd. v. CLS Bank International, 134 S. Ct. 2347 (2014), identifies a two-step framework for determining whether claimed subject matter is judicially excepted from patent eligibility under 35 U.S.C. § 101. In the first step, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice*, 134 S. Ct. at 2355. The Federal Circuit has instructed that “[t]he ‘directed to’ inquiry . . . [does not] simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon,”

² Claim 50 does not stand rejected under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) in the Final Rejection. In the event of further prosecution, the Examiner may want to consider whether claim 50 is anticipated or obvious for similar reasons as claim 9.

but rather “applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (citing *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

The Examiner determines:

Claim(s) 1–58 are directed to a method of generating a user profile based on location fixes by receiving a set of location fixes which represent the location of a mobile device, combining the set of location fixes to generate a user location history, identifying a set of visited locations in the user location history, sorting the set of visited location histories by dwell time at each location and generating a user profile based on the sorted set of visited locations, which is considered an abstract idea.

Final Act. 2. The Examiner compares the claims to those in *Cyberfone Systems, LLC v. CNN Interactive Grp, Inc.*, 558 F. App’x 988 (Fed. Cir. 2014) (nonprecedential), finding “the current invention uses sets of locations to organize and store user location history in a user profile” and *Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014), finding “the current action sorts the actions by dwell time which is organizing the information.” Final Act. 2–3.

Appellants argue the claims “are not a fundamental economic practice, a method of organizing human activities[,] an idea ‘of itself,’ and/or a mathematical relationship or formula.” App. Br. 8. In addition, Appellants argue the “types of detailed features [in the claims] are clearly in contrast to the very high-level abstract ideas in the relevant case law on this topic.” App. Br. 8.

We are persuaded by Appellants’ arguments inasmuch as we agree that the Examiner has not sufficiently articulated the abstract idea and has not explained why the claims are directed to an abstract idea. More specifically, the Examiner has not established what the claimed invention is directed to in a manner sufficient for us to evaluate whether it represents, for example, a fundamental economic practice or method of organizing human activity. Merely reciting the claim language and stating that it is “considered to be an abstract idea” (Final Act. 2) is not sufficient. Although the Examiner compares the claims to those in *Cyberfone* and *Digitech*, the comparison is generic, conclusory, and fails to consider the claims as a whole. *See Internet Patents*, 790 F.3d at 1346 (“the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.”)

Because we determine the Examiner does not show the claims are directed to an abstract idea, we need not reach the second step. However, we are further not persuaded the Examiner establishes the claims are excepted under the second part of the test. In the second step of the *Alice* analysis, we “consider the elements of each 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*, 134 S. Ct. at 2355 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78–79 (2012)). In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, 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.’” *Id.* (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Examiner determines:

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the combination of elements, when considered alone or in combination, do nothing more than use “a communication device” or a “wireless interface to a mobile device and a server” to perform the steps of the abstract idea of generating a user profile using location fixes. The “GPS”, “A-GPS”, “Galileo system”, “Tower triangulation”, type of “mobile de[v]ice” all describe the data that is being or generically link the steps to a computing environment. The additional elements of the claims do not add a meaningful limitation to the abstract idea because they are generic computer components which perform generic computer functions and they would be routine in any computer implementation. Therefore the combination of elements in the claims are not sufficient to amount to significantly more than the abstract idea.

Final Act. 3. In addition, the Examiner determines:

[T]he claims are directed to a generic computer running software, i.e.[,] a series of mathematical formulations, i.e.[,] if a then b, or a>b goto, in a language such as Java or C, in computer code, perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry, in common commercial activities. Any commercial software could be called a series of mathematical formulations, think of the millions of lines of computer code that make up windows software, but the public record must show that the concept of the claims are directed towards software to manage a common commercial activity. Independent claims are directed towards a business model for building a user profile, expressed as abstract computer programming generic computer components.

Final Act. 13–14; *see also* Ans. 3. The Examiner also states that because claim 1 “has been properly and finally given a 102(b)

reject[ion], each element [is] found to be well-understood, routine[,] and conventional.” Ans. 2.

Appellants argue “whether or not specific claim features are ‘well-understood, routine and conventional,’ and thus amount to significantly more than the judicial exception itself, is a factual analysis that must be based on evidence.” App. Br. 9. According to Appellants, certain claim limitations “have been characterized as ‘well-understood, routine and conventional’ without any evidentiary support.” App. Br. 10; *see also* Reply Br. 3–4.

We agree with Appellants. “The 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 v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Here, the Examiner has merely identified certain computer components recited in the claim and found that those computer components are generic and perform generic computer functions. However, even if the claimed invention uses generic computer components, the “inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). As one example, the Examiner has not sufficiently explained how the step of “generating, by the communications device, a user profile for the use or of the mobile device based at least on the set of significant locations” is performed in a well-understood, routine, and conventional manner. Therefore, the Examiner has not established with appropriate factual evidence that the claims use well-understood, routine and conventional functionality. *See Berkheimer*, 881 F.3d at 1369 (cautioning

that “[t]he mere fact that something is disclosed in a piece of prior art [] does not mean it was well-understood, routine, and conventional”).

Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 101 rejection of claims 1–58.

35 U.S.C. § 102(b) Rejections

Issue: Did the Examiner err in finding DeWolf discloses “sorting, by the communications device, the set of visited locations by at least dwell-time of the mobile device at each of the set of visited locations to identify a set of significant locations to the user of the mobile device,” as recited in independent claim 1 and commensurately recited in independent claims 16, 21, 26, 31, 36, 43, and 48?

The Examiner finds

The cited section of DeWolf (para 68) is believed to teach this element by disclosing “The observed activities (step 520) are categorized by analyzing the time data, frequency, route, etc. associated with the subscriber 210. The different locations are sorted by time spent in each location, 6 para 68, example given as commute to work, another example given in para 69, the observed locations may be defined in terms of time spent at the location. For example, in the last week the subscriber 210 was at the park for 3 hours.). Webster’s Dictionary defines sort as: a group set up on the basis of any characteristic in common, thus the categorizing of [DeWolf] shown in fig. 4 # 420, and paragraph 58, categorizing location, teaches this element, in which the top locations are prioritized for serving advertisements.

Ans. 3–4; *see also* Final Act. 4–5.

Appellants argue “DeWolf does not disclose or suggest ‘sorting . . . the set of visited locations,’ much less ‘sorting . . . the set of visited locations

by at least dwell-time of the mobile device at each of the set of visited locations to identify a set of significant locations to the user of the mobile device.” App. Br. 14; *see also* Reply Br. 6–8. According to Appellants, “DeWolf makes no mention of ‘sorting’ and . . . the Examiner does not appear to explain how ‘the sorted set of visited locations’ is disclosed by DeWolf.” App. Br. 14. Appellants further argue there is no “disclosure or suggestion that ‘the time, location and other features’ used in the classification include ‘at least dwell-time of the mobile device at each of the set of visited locations.’” App. Br. 14.

We agree with Appellants. DeWolf generally describes a method and system for profiling a subscriber based on observing activities and locations where the subscriber travels. DeWolf ¶ 19. DeWolf describes storing data related to a subscriber’s location and time at that location, and then processing the data to observe activities that the subscriber partakes in and observes locations that the subscriber visits. DeWolf ¶ 67. DeWolf describes “categorizing” observed activities by “analyzing the time data, frequency, route, etc. associated with the subscriber.” DeWolf ¶ 68. DeWolf also describes that “observed locations may be defined in terms of time spent at the location.” DeWolf ¶ 69. This information is used to predict a subscriber’s activity. DeWolf Abstract.

DeWolf also separately describes the generation of a location profile (separate from a subscriber location profile) that consists of data related to locations including, for example, a location type, the type of entities that visit that location, and the clientele or characteristics of those entities. DeWolf ¶¶ 56, 58, Fig. 4A, 4B. Location attributes such as parks, shopping centers, and business districts, are used to categorize the locations into, for

example, residential areas, commercial areas, or other location types. DeWolf ¶ 58. The location category may be broken down into subcategories, such as retail establishments, restaurants, or businesses, and further defined to identify a specific entity, such as The GAP. DeWolf ¶ 59. This location profile information is used to determine the profile of the subscriber. DeWolf ¶¶ 45, 57.

We do not see where DeWolf describes that the “[t]he different locations are sorted by time spent in each location,” as the Examiner finds (*see* Ans. 4) or indeed where DeWolf describes any sorting of the different locations. The Examiner appears to rely on the categorization of observed activities and/or the categorization of the locations to teach “sorting.” The Examiner offers a noun definition of the term “sort.” However, the term “sorting,” as used in the claim, is a verb. “Sorting” is defined as “to put in a certain place or rank according to kind, class, or nature” or “to arrange according to characteristics.” *Merriam-Webster online Dictionary*, <http://www.merriam-webster.com/dictionary/sort>. This is consistent with how the term is used in Appellants’ Specification. *See, e.g.*, Spec. 7–9, Fig. 2A. Although DeWolf discloses that observed locations may be defined in terms of time spent at that location, the Examiner does not identify where these observed locations are sorted. We do not agree with the Examiner that the aforementioned “categorizing” of the activities or in the context of creating a location profile discloses “sorting . . . by at least dwell-time at each of the set of visited locations to identify a set of significant locations to the user of the mobile device.”

Appellants present additional arguments. However, because the identified issue is dispositive of the appeal with regard to the rejections

under 35 U.S.C. § 102(b), we do not reach the additional issues. Accordingly, we do not sustain the Examiner's 35 U.S.C. § 102(b) rejections of independent claims 1, 16, 21, 26, 31, 36, 43, and 48. For the same reasons, we do not sustain the Examiner's rejections of dependent claims 2–15, 17–20, 22–25, 27–30, 32–35, 37–42, 44–47, and 49–58.

DECISION

The Examiner's 35 U.S.C. § 101 rejection of claims 1–58 is reversed.

The Examiner's 35 U.S.C. § 102(b) rejection of claims 1–14, 16, 17, 19, 21, 22, 24, 26, 27, 29, 31, 32, 34, 36, 37, 39, 42–44, 46, 48, 49, 51–53, and 56–58 is reversed.

The Examiner's 35 U.S.C. § 103(a) rejection of claims 15, 18, 20, 23, 25, 28, 30, 33, 35, 38, 40, 41, 45, 47, 54, and 55 is reversed.

REVERSED