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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIC S. CARLSGAARD, MARK G. MEARS, ROBERT E. REINKE, and JUSTIN DAVID ADAMS

Appeal 2017-007217
Application 13/462,055
Technology Center 3600

Before JOSEPH L. DIXON, ELENI MANTIS MERCADER, and NORMAN H. BEAMER, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] appeal under 35 U.S.C. § 134(a) from a rejection[2] of claims 11–14 and 16–26. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

The claims are directed to a user interface features for a diabetes management application contextualizing manual entries of blood glucose measures for a patient into a patient log of a portable computing device. Claim 11, reproduced below, is illustrative of the claimed subject matter:

> 11. A computer-implemented method for displaying results of at least a three-day structured collection procedure of blood glucose measures obtained by a blood glucose meter to a user of a portable computing device, comprising
>
> administering, by the computing device, a structured collection procedure over a period of three days to the user, where the structured collection procedure specifies seven future events of pre-breakfast, post-breakfast, pre-lunch, post-lunch, pre-dinner, post-dinner, and bedtime and an acceptance window that is prospective for each of the plurality of future events for obtaining blood glucose measures from a patient throughout the course of a given day;
>
> obtaining blood glucose measures from the patient by the user operating the blood glucose meter to perform the structured collection procedure over the period of three days;

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[1] Appellants indicate that Roche Diabetes Care, Inc. is the real party in interest. App. Br. 3.

[2] We herein refer to the Final Office Action, mailed Nov. 3, 2015 ("Final Act."); Appeal Brief, filed June 3, 2016 ("App. Br."); Examiner's Answer, mailed Feb. 9, 2017 ("Ans."); and the Reply Brief, filed Apr. 7, 2017 ("Reply Br.").

transferring blood glucose measures from the blood glucose meter to the computing device by the user;

determining, by a sensor residing in the computing device, an orientation of a display of the computing device;

displaying, on a display of the computing device, a first graph for the structured collection procedure in response to a determination that a longitudinal axis of the display is orientated vertical, the first graph plots blood glucose measures from the seven predetermined events that meet the acceptance window that is prospective from each of the three days on the first graph such that one axis of the first graph represents time during a single day and blood glucose measures for each day is a time series represented by a separate line on the first graph; and

displaying, on a display of the computing device, a second graph for the structured collection procedure in response to a determination that the longitudinal axis of the display is orientated horizontal, the second graph plots blood glucose measures from the seven predetermined events that meet the acceptance window that is prospective for each of the three days on the second graph such that one axis of the second graph represents time over three days and blood glucose measures are a time series represented by a single line on the second graph.

(App. Br., Claims Appendix, 20–21.)

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Rosman et al., hereinafter "Rosman"	US 2007/0128682 A1	June 7, 2007;
Weinert et al., hereinafter "Weinert"	US 2008/0177149 A1	July 24, 2008;

Soni et al. US 2010/0218132 A1 Aug. 26, 2010; hereinafter "Soni"

REJECTIONS

The Examiner made the following rejections:

Claims 11–14 and 16–26 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. (*See* Final Act. 2–3.)

Claims 11–14 and 19–23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Soni in view of Rosman. (*See* Final Act. 3–13.)

Claims 16–18 and 24–26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Soni in view of Rosman in further view of Weinert. (*See* Final Act. 13–20.)

ANALYSIS

Patent eligibility under 35 U.S.C. §101

In *Alice*, the Supreme Court sets forth an analytical "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Id.* (citing *Mayo*, 566 U.S. at 77–78). If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims "individually and 'as an ordered

combination'" to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 79, 78). 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.* (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73). The prohibition against patenting an abstract idea "'cannot be circumvented by attempting to limit the use of the formula to a particular technological environment' or adding 'insignificant post-solution activity.'" *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (citation omitted).

Turning to the first step of the *Alice* inquiry, the Examiner maintains that independent claims 11 and 19 are directed to abstract ideas. The Examiner finds that the claims are directed to:

> the abstract idea of administering a structured collection procedure, obtaining patient blood glucose measures, transferring the blood glucose measures, determining orientation display to display a first & second graph for the structured collection procedure, which is interpreted as the abstract idea of comparing new & stored information using rules to identify options.

(Final Act. 2).

Appellants' arguments, discussed below along with a discussion of various findings and conclusions of the Examiner, raise the dispositive issue of whether or not the claims are directed to an abstract idea at all. As further explained below, we find the Examiner has overgeneralized the claims in formulating the rejection. Moreover, we find the Examiner provides little analysis and factual support for the proffered findings that elements of the

claimed invention are "well-known, routine, and conventional" in many areas of business. (Final Act. 2).

Appellants contend:

> Furthermore, the claim does not recite a basic concept that is similar to any abstract idea previously identified by the courts. For example, the claim does not recite any mathematical concept or mental process that can be performed in the human mind. Additionally, the claim does not recite any other judicial exception. In contrast, the examiner asserts that the claims are directed to "the abstract idea of comparing new & stored information using rules to identify options" (see page 2 of the Office Action dated June 23, 2015). As recently noted by the Federal Circuit, "describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to §101 swallow the rule". Applicant contends the examiner's assertion is overly broad and the claim is not directed to an abstract concept. The Board's attention is also directed to the recent Federal Circuit decision of *Enfish v. Microsoft Corp.* which held that improvements in computer-related technology are not inherently abstract. Accordingly, claim 11 is not directed to a judicial exception and thus constitutes eligible subject matter.
>
> Assuming arguendo that this claim recites an abstract concept, claim 11 recites meaningful limitations that amount to significantly more than the abstract concept of "comparing new & stored information" as identified by the examiner. For example, claim 11 recites "obtaining blood glucose measures from the patient by the user operating the blood glucose meter to perform the structured collection procedure over the period of three days; [and] transferring blood glucose measures from the blood glucose meter to the computing device by the user". Thus, the claim as a whole adds meaningful limitations beyond comparing and storing new information. Additionally, the determining and displaying steps of the claim improve the manner in which the glucose measures are presented to the patient. These additional claim limitations should be considered

> both individually and as an ordered combination. The examiner's rejection only considered the steps individually and no detailed assessment of the combination has been provided. When taken as a whole, claim 11 has additional limitations that amount to significantly more than the abstract concept and thus recited patent eligible subject matter. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

(App. Br. 12–13).

The Examiner finds the claims:

> are directed to the abstract idea of administering a structured collection procedure, obtaining patient blood glucose measures, transferring the blood glucose measures, determining orientation display to display a first & second graph for the structured collection procedure, which is interpreted as the abstract idea of comparing new & stored information using rules to identify options. While the claims do not explicitly recite "comparing new & stored information using rules to identify options", the concept of "comparing new & stored information using rules to identify options" is described by the functional steps of administering a structured collection procedure, obtaining patient blood glucose measures, transferring the blood glucose measures, determining orientation display to display a first & second graph for the structured collection procedure.

(Final Act. 2). The Examiner further finds:

> The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the computer as recited is a generic computer component that performs generic computer functions that are well- understood, routine, and conventional activities previously known to the industry. See [0030-39] of the Specification, which discloses a generic computer system consisting of portable computing device, logging module, test administration module, reminder interface module & sensors.

(Final Act. 2). The Examiner further finds:

> The claim recites a basic concept that is similar to identified abstract idea(s) previously identified by the courts, such as "An idea of itself' as referenced in *Alice Corp.* An example of "An idea of itself" are the concept that it is analogous to the court-defined abstract ideas outlined in *(Smartgene), (Classen)*& *(Electric Power Group),* all of which are analogous to the obtaining, transferring, determining, comparing & outputting steps found in the Applicants' claims.

(Ans. 2). The Examiner's response to Appellants' argument regarding *DDR*, the Examiner finds the present claims merely:

> implement the known practice of "administering stored data" AND obtaining, transferring, comparing (determining), outputting decision based on comparison in a new environment. (See *Alice,* 134 S. Ct. at 2356) Further, there are no unconventional steps recited in the claims. The claims are directed to an abstract idea as shown in the previous Office Action. The Examiner asserts that the claimed methods do not amount to more that the identified abstract ideas. The claims do not solve an unconventional problem; they solve a problem utilizing computer technology. These are two different things. The purported improvements of the claimed invention improve the same technical field, not another. The claimed invention does not improve the functioning of the computer and, actually, there are no claims directed to such an improvement. The Examiner notes that performing a method on a computerized-device may make the method perform better (which is what computers are for), but it does not physically improve the function of the computer at all. The CAFC has again reiterated that "our precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea." *(Intellectual Ventures ILLC v. Capitol One Bank (USA), No. 2014-1506, slip op. at 12 (Fed. Cir. July 6, 2015).*

(Ans. 3). In response to Appellants' arguments regarding *Enfish*, the Examiner finds:

> claims are considered to be directed to a patent-ineligible concept where the focus of the asserted claims is on collecting information, analyzing it, and displaying certain results of the collection and analysis. Information as such is an intangible. Accordingly, we have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas. In a similar vein, we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category. And we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. Here, the claims are clearly focused on the combination of those abstract-idea processes. The advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular "specific improvements" for performing those functions. They are therefore directed to an abstract idea. The advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular "specific improvements" for performing those functions.

(Ans. 3–4). Finally, in response to Appellants' arguments that the Examiner has not considered the limitations as an ordered combination, the Examiner finds:

> Rather, these limitations [*sic*, are] correspond to concepts identified as abstract ideas by the courts, such as "an idea of itself" in *Alice* (i.e. "comparing new & stored information using rules to identify options" in *(SmartGene)* or "Collecting information, analyzing it, and displaying certain results of the collection and analysis" *(Electric Power Group))* In addition, the

> Examiner points out the Applicants' Specification [86,93-94] discloses general purpose computer hardware, to merely execute the loaded software. However, merely adding the software, does not make the device(s) "special purpose" or constitute "significantly more", rather it merely frames the identified abstract concept in a technical environment because the claims fails to solve a technological problem or provide a specific technique for actually transformation of the disclosed data.

(Ans. 5).

> Appellants renew their contention that:
>
> the examiner's assertion is overly broad and the claim is not directed to an abstract concept. The Federal Circuit has cautioned against "describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to §101 swallow the rule." See, *Enfish v. Microsoft Corp*

(Reply Br. 3). Appellants further contend:

> the Court reasoned that "Recent decisions emerging from the Federal Circuit that have held claims to be patent eligible. In particular, the Board's attention is drawn to *Trading Technologies Int'l, Inc. v.* CQG, *Inc.* In this case [*Trading Technologies*] the claims relate to a method and system for electronic trading of stocks, bonds, futures, options and similar products
> …
>
> the claims [in *Trading Technologies*] require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface's structure that is addressed to and resolves a specifically identified problem in the prior state of the art". The Court went on to say "ineligible claims generally lack steps or limitations specific to solution of a problem, or improvements in the function of technology". Similar reasoning was used by the Court to find

> that claims directed to processes for automated lip synchronization animation were patent eligible. *MCRO, Inc., v. Bandai Namco* Games *America Inc.* 837 F.3d 1299 (Fed. Cir. 2016). In this case, the Court also stated "the claim uses the limited rules in a process specifically designed to achieve an improved technological result".
>
> Claims in the pending application are more analogous to the claims in these two decisions than any court decision identified by the examiner.

(Reply Br. 4). Finally, Appellants contend:

> applicant's claims improve diabetes care by enabling patients to better understand their glucose measurements as well as contextual and other factors that impact glucose measurements. Specifically, the claim addresses the problem of presenting measurements, such as glucose measures, taken over multiple days in an intuitive and comprehendible manner on the display of a portable computing device. By reciting limitations that are specifically designed to achieve an improvement, the pending claims are patent eligible. That is, claims 11 and 19 are not directed to a judicial exception and thus constitutes eligible subject matter.

(Reply Br. 5).

We agree with Appellants that the Examiner's rejection was formulated at too high of a level of abstraction which did not correlate well with the express language of independent claim 11. Furthermore, the Examiner's rejection does not address the two conditional steps of "displaying…" two different display functions relative to a determination of the physical orientation of the display device so as to be more appropriate/useful display depending on the orientation of the display device. We find the Examiner has not addressed this distinction in the

analysis for patent eligible subject matter.[3] As a result, we conclude that the Examiner erred in his underlying factual findings and ultimate conclusion of a lack of patent eligible subject matter because the Examiner's analysis overgeneralized the claimed invention and additionally therefore overgeneralized the sequence of steps as a whole as an appropriate ordered combination.

We agree with Appellants on each of the separate arguments above. In the patent eligibility rejection, the Examiner must present evidence or a convincing line of reasoning why invention as recited in claim 1 would not have been patent eligible. We find the Examiner's analysis to be flawed based upon an over generalization of the abstract idea and oversimplification of the recited claim functions. Because we find the Examiner has erred in the finding of an abstract idea and basing of the remainder of the analysis upon this finding, we cannot sustain the Examiner's conclusion of a lack of patent eligible subject matter of independent claim 11 and its respective dependent claims based upon the Examiner's stated analysis.

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[3] We do note that the Examiner identified para. 86 of Appellants' Specification in the obviousness rejection, but the Examiner did not make any specific findings regarding "well-known routine and conventional" steps in the patent eligibility determination. ("More specifically, a determination is made as to the orientation of the display being used to present test results. That is, whether the display (or a longitudinal axis thereof) is oriented vertically or horizontally. One or more accelerometers and/or other types of sensors residing in the computing device may be used to determine the orientation. *Such techniques are commonly found in mobile computing devices.*" (Spec. ¶ 86)(emphasis added).

With respect to independent claim 19, the Examiner did not meet this initial burden because the Examiner did not address the totality of the claimed invention. As a result, we cannot sustain the Examiner's patent eligibility rejection of independent claim 19 and its corresponding dependent claims.

Obviousness under 35 U.S.C. § 103

With respect to the obviousness of independent claim 11, Appellants set forth that the Examiner has erred in the obviousness rejection over the combination of the Soni and Rosman references because as conceded by the Examiner the Soni reference does not teach the two different graphs and the Examiner has relied upon the Rosman reference to teach or suggest the two different graphs. (App. Br. 14). Appellants contend that the Rosman reference discloses two separate graphs which are the same format and are not displayed in response to a determination of a display orientation. (App. Br. 15). Additionally, Appellants contend that the Rosman reference does not teach the specific graphs as recited in the language of independent claim 11. (App. Br. 15). Appellants further contend that independent claim 11 additionally recites the step of determining by a sensor and the identified portion of the Soni reference in paragraph 60 does not teach the use of any orientation sensor. (App. Br. 17). Appellants further contend that the Examiner's rejection does not recognize the link between determining orientation of the device and the format of the graph being displayed. (App. Br. 17–18).

In the Examiner's Answer, the Examiner attempts to remedy the noted deficiencies set forth by Appellants. Specifically, the Examiner maintains:

> Applicants' Specification [86] states: "a determination is first made at 1302 as to the orientation of the computing device. More specifically, a determination is made as to the orientation of the display being used to present test results. That is, whether the display (or a longitudinal axis thereof) is oriented vertically or horizontally . . . One or more accelerometers and/or other types of sensors residing in the computing device may be used to determine the orientation. Such techniques are commonly found in mobile computing devices."

(Ans. 5 [emphasis omitted]). By relying upon Appellants' Specification, the Examiner appears to be further relying upon well-known features of "mobile computing devices" in the grounds of the rejection, but the Examiner has not shown that the devices of the Soni or the Rosman references would have been well-known "mobile computing devices" which would have had a need for the use of "such techniques."

While we agree with the Examiner that portable/mobile computing devices with a touch screen inputs at the time of the invention may have additionally had well-known sensors for those inputs, the Examiner did not rely upon well-known mobile computing devices in the grounds of the rejection. *See In re Hoch*, 428 F.2d 1341, 1342 n.3 (CCPA 1970) ("[W]here a reference is relied on to support a rejection, whether or not in a 'minor capacity,' there would appear to be no excuse for not positively including that reference in the statement of the rejection.").

Additionally, we note that the Soni reference is assigned to the same real party in interest (Roche Diabetes Care, Inc.) and was a prior art glucose monitoring device with a display which is relatively similar in both the X and Y dimensions, which we find would have no perceived benefit having the addition of an orientation sensor because of the same physical

dimensions of the display in both the X and Y directions. Nor has the Examiner identified any teaching or suggestion in the Rosman reference for having an orientation sensor and having corresponding two different graphs for differing orientations.

Finally, the Examiner finds:

> Further, the Examiner points out the Applicants' drawings (Fig: 12, 14A-B) show the type of data being measured on the Latitude Axis (is TIME) & Longitudinal Axis (is Glucose), it [*sic*, in] both orientations, therefor the type data being displayed the same type of data in each orientation. The Examiner points out this is this merely incorporating the commonly known features of alternating between "Landscape" and "Portrait" display which is a commonly known features to many computer devices, including portable computing devices (Applicant's Fig:12 shows display on an "Android" phone)

(Ans. 5–6).

Again, the Examiner's reliance upon Appellants' Specification, drawings and the detailed description in responding to Appellants' arguments regarding the prior art rejection does not show the combination of the Soni and Rosman references would have taught or suggested the claimed invention at the time of filing based upon the teachings within each of the two references. Additionally, the Examiner oversimplifies Appellants' Figures 14A and 14B where the data for three separate days in Figure 14A is overlaid upon each other whereas in Figure 14B the graphs for the three separate days are appended/concatenated end to end rather than overlaid upon each other. Consequently, the varied screen dimensions correspond to the varied presentation of the same data in differing formats.

We agree with Appellants on each of the separate arguments.

In the obviousness rejection, the Examiner must present evidence or a convincing line of reasoning why the prior art would have taught or suggested the invention as recited in claim 11 and its corresponding dependent claims. Here, the Examiner has not met the initial burden and therefore we cannot sustain the Examiner's decision to reject independent claims 11 and 19 that each have similar limitations, and their corresponding dependent claims.

CONCLUSIONS

The Examiner erred in rejecting claims 11–14 and 16–26 based upon a lack of patent eligibility subject matter under 35 U.S.C. § 101, and the Examiner erred in rejecting claims 11–14 and 16–26 based upon obviousness under 35 U.S.C. § 103.

DECISION

For the above reasons, the Examiner's rejections of claims 11–14 and 16–26 are reversed.

REVERSED