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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHANG-SHAN CHUANG and HAO-YUAN CHUANG[1]

Appeal 2016-004915
Application 12/968,158
Technology Center 2800

Before N. WHITNEY WILSON, CHRISTOPHER C. KENNEDY, and MICHAEL G. McMANUS, *Administrative Patent Judges*.

KENNEDY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–4, 8, and 17–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

The subject matter on appeal relates to a "machine-implemented method and an electronic device for graphically illustrating a statistical display and a computer program product for implementing the method."

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[1] According to the Appellants, the real party in interest is Chii Ying Co., Ltd. App. Br. 1.

E.g., Spec. 1:10–19; Claim 1. Claims 1 and 17 are reproduced below from pages i and iii (Claims Appendix) of the Appeal Brief:

1. A machine-implemented method for graphically illustrating a statistical display based on a set of numerical data using a computer processor that executes a computer program, said machine implemented method comprising the steps of:

(a) finding, using the computer processor, a median of the set of numerical data, and finding, with the processor, a subset of the numerical data containing a plurality of members, each member of the subset of the numerical data corresponding to a member of a predetermined set of cumulative distribution probabilities of the Gaussian distribution, wherein an input unit permits input of the set of numerical data from an external data source to the computer processor, which then stores the set of numerical data in a numerical database;

(b) computing, using the computer processor, a mean of the set of numerical data and a standard deviation of the set of numerical data, wherein each member of the predetermined set of cumulative distribution probabilities of the Gaussian distribution corresponds to a range of the standard deviation from the mean;

(c) computing, using the computer processor, a plurality of reference values, each differing from the mean of the set of numerical data by a corresponding predetermined number multiplied by the standard deviation of the set of numerical data;

(d) generating, using the computer processor, a plot that includes a first line, a second line and a plurality of connecting lines, the first line extending in an axis direction and having the median and the subset of the numerical data found in step (a), the second line extending in the axis direction, being spaced apart from the first line, and having the mean and the reference values computed in step (c), one of the connecting lines connecting the median and the mean, and the other of the connecting lines respectively connecting corresponding pairs of the subset of the numerical data and the reference values; and

(e) outputting the plot using an output unit for viewing by a user.

17. The machine-implemented method of claim 1, wherein the processor includes a data selecting unit, a computing unit, and a plot generating unit.

REJECTIONS ON APPEAL

1. Claim 17 stands rejected under 35 U.S.C. § 112, ¶ 2, as indefinite for failure to disclose structure corresponding to functional limitations as required by 35 U.S.C. § 112, ¶ 6.[2]

2. Claims 1–4, 8, and 17–20 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

ANALYSIS

After review of the cited evidence in the appeal record and the opposing positions of the Appellants and the Examiner, we determine that the Appellants have not identified reversible error in the Examiner's rejections. Accordingly, we affirm those rejections for reasons set forth below, in the Final Action, and in the Examiner's Answer. *See generally* Final Act. 3–7; Ans. 2–9.

Rejection 1

The Examiner determines, and the Appellants do not dispute, that the terms "data selecting unit" and "plot generating unit" of claim 17 invoke 35 U.S.C. § 112, ¶ 6. Final Act. 3. The Examiner determines that "the written description fails to disclose the corresponding structure, material, or acts for the claimed function. The claimed elements 'data selecting unit' and 'plot

[2] The Examiner's rejection does not expressly identify the claims subject to this rejection. *See* Final Act. 3. However, the terms identified by the Examiner as invoking § 112, ¶ 6 appear only in claim 17.

generating unit' are merely shown as black boxes (101) and (103) [in Figure 6], respectively." *Id.*

> With respect to the "data selecting unit," the Appellants argue:
>
> The corresponding structure . . . is a unit 101 of the processor 10 shown in Fig. 6, programmed (110, Fig. 5) to carry out the algorithm described on page 20, lines 16–20 ("data selecting unit 101 finds the median (M) of the set of numerical data, and further finds the subset of the numerical data, each corresponding to a member of the predetermined set of cumulative distribution probabilities of the Gaussian distribution").

App. Br. 3; *see also* App. Br. 5.

> With respect to the "plot generating unit," the Appellants argue:
>
> "The corresponding structure . . . is a unit 103 (Fig. 6) of the processor 10, programmed (110) to carry out the algorithm described on page 7, line 16 – page 8, line 1 ("plot generating unit . . . generat[es] a plot that includes a first line, a second line and a plurality of connecting lines. The first line extends in an axis direction and has the median and the subset of the numerical data found by the data selecting unit marked thereon. The second line extends in the axis direction, is spaced apart from the first line, and has the mean and the reference values computed by the computing unit marked thereon. The connecting lines respectively connect the median and the mean, and corresponding pairs of the subset of the numerical data and the reference values.").

Id. at 3–4; *see also id.* at 5.

We are not persuaded by the Appellants' arguments. The Appellants acknowledge that "the corresponding structure for a function performed by a software algorithm is the algorithm itself." *Id.* at 5 (internal alterations omitted) (quoting *Eon Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 621 (Fed. Cir. 2015)). The Appellants' identification of algorithms appears on pages 3–4 of the Appeal Brief, quoted in relevant part

above. However, the portions of the Specification quoted by the Appellants focus on what the "data selecting unit" and "plot generating unit" do, not how they do it. For instance, the Appellants state that the algorithm corresponding to "data selecting unit" is finding the median of a set of data and finding the subset of numerical data. App. Br. 3; Reply Br. 2. But that "simply describes the function to be performed, not the algorithm by which it is performed." *See Aristocrat Techs. Australia Pty v. Int'l Game Tech.*, 521 F.3d 1328, 1334 (Fed. Cir. 2008). Thus, in discussing an algorithm for implementing a finding function, the Examiner is not "reading something into claim 17 . . . that is not there," *see* Reply Br. 2, but is instead seeking an algorithm for the "finding" aspect of the "data selecting" function that is allegedly performed by the data selecting unit.

Essentially the same analysis applies to the term "plot generating unit." In particular, the Appellants' identification of the algorithm corresponding to the "plot generating unit" merely describes the plot that is generated, not the algorithm by which the plot is generated. *See* App. Br. 3–4; Reply Br. 2.

On this record, we are not persuaded of reversible error in the Examiner's rejection under § 112, ¶ 2. *See In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) ("[I]t has long been the Board's practice to require an applicant to identify the alleged error in the examiner's rejections . . . ."). We affirm the rejection.

Rejection 2

The Appellants argue the claims subject to Rejection 2 as a group. We select claim 1 as representative, and the remaining claims subject to Rejection 2 will stand or fall with claim 1.

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court stated in *Bilski v. Kappos*, 561 U.S. 593, 601 (2010), that "[t]his Court's precedents provide three specific exceptions to § 101's broad principles: laws of nature, physical phenomena, and abstract ideas." (internal quotation marks omitted) (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 309, 100 S. Ct. 2204 (1980)). The Court further stated that limiting an abstract idea to a particular technological environment does not make the concept patentable. *See Bilski*, 561 U.S. at 610.

Determining whether a claimed invention is directed to patent-eligible subject matter is a two-step process that requires (1) evaluating whether the claim is directed toward a patent-ineligible concept, i.e., a law of nature, natural phenomenon, or abstract idea; and, if so, (2) determining whether the claim's elements, considered both individually and as an ordered combination, transform the nature of the claim into a patent-eligible application. *See Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2350 (2014).

The Examiner determines that claim 1 is directed to non-statutory subject matter "because the claim[] as a whole, considering all claim elements both individually and in combination, do[es] not amount to significantly more than an abstract idea." Final Act. 5. Specifically, the Examiner determines that claim 1 is directed to the "abstract idea of graphically illustrating a statistical display based on a set of numerical data comprising computing steps and plotting step based on the computing step."

Id. The Examiner determines that nothing in the claim "transform[s] the abstract idea into a patent eligible application of the abstract idea." *Id.*

The Appellants first argue that the rejection should be reversed because "[t]here is no evidence of record that the claims are directed to an abstract idea," and "the first step in the *Alice* framework requires an evidentiary showing." App. Br. 5–6 (emphasis in original).

That argument is not persuasive. As an initial matter, we note that the Appellants provide no citation for the specific assertion that "the first step in the *Alice* framework requires an evidentiary showing." *See* App. Br. 6 (emphasis in original). The Federal Circuit has explained that, with regards to determining whether a claim is directed to an abstract idea, "the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided." *See Amdocs (Israel) Limited v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

In this case, we agree with the Examiner that claim 1, by its plain language, is directed to an abstract idea. Claim 1 recites steps for "identifying," "storing," "computing," "generating," and "outputting," and the steps are completed by a generic "computer processor." It is not an oversimplification to describe claim 1 as reciting steps for preparing and displaying a data plot. The preamble of the claim supports that determination: "[a] machine-implemented method for graphically illustrating a statistical display . . . ."

Plotting data on displays is a fundamental practice that has long been completed by hand using pen and paper. Moreover, the Federal Circuit has held that claims similar to those at issue here—directed to collecting,

generating, organizing, and displaying data—are directed to patent-ineligible abstract ideas. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097–98 (Fed. Cir. 2016) ("the practices of collecting, analyzing, and displaying data, with nothing more, are practices 'whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas'"); *see also, e.g.*, *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017); *West View Research, LLC v. Audi AG*, 685 F. App'x 923, 926 (2017) (nonprecedential); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014); *cf. also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1368 (Fed. Cir. 2015) ("Indeed, the budgeting calculations at issue here are unpatentable because they could still be made using a pencil and paper with a simple notification device . . . ." (internal quotation marks and citations omitted)).

In this case, the mere fact that claim 1 may not preempt all methods of graphically displaying data, *see* App. Br. 8–9, does not persuade us that claim 1 is not directed to an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) ("[T]he absence of complete preemption does not demonstrate patent eligibility."). Indeed, beyond arguing that claim 1 does not preempt *all* methods of graphically displaying data, the Appellants do not otherwise dispute the Examiner's determination that claim 1 is directed to an abstract idea, nor do they provide a persuasive explanation as to how or why claim 1 is not directed to an abstract idea.

On this record, we are not persuaded of error in the Examiner's conclusion that the subject matter of claim 1 is directed to an abstract idea.

With respect to the second step of *Alice*, the Appellants do not dispute the Examiner's determination that nothing in the claims "transform[s] the abstract idea into a patent eligible application of the abstract idea." *See* Final Act. 5.

The Appellants' additional argument that the Examiner's rejection fails to comply with 35 U.S.C. § 132(a) because it "does not provide the required 'information and references,'" is also unpersuasive. *See* App. Br. 8. As set forth above, the Examiner adequately explains the basis for the rejection, and the abstract nature of the claim is evident from the claim language itself, particularly in light of the fact that the claimed subject matter is similar to other data collection/organization/manipulation/display claims that have previously been determined to be directed to abstract ideas.

We determine that the Appellants have not identified reversible error in the Examiner's rejection of claim 1. We affirm the rejection.

CONCLUSION

We AFFIRM the Examiner's rejection of claim 17 under 35 U.S.C. § 112, ¶ 2.

We AFFIRM the Examiner's rejection of claims 1–4, 8, and 17–20 under 35 U.S.C. § 101.

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

AFFIRMED