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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte XINJIE (JAY) ZHU

Appeal 2017-008628¹
Application 12/755,412
Technology Center 3600

Before HUNG H. BUI, JON M. JURGOVAN, and ADAM J. PYONIN,
Administrative Patent Judges.

PYONIN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject all pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ “The real party in interest is Oracle International Corporation, the assignee of record.” App. Br. 1.

STATEMENT OF THE CASE

Introduction

The Application is directed “to tools that support product lifecycle management” using a “bill of materials (BOM) [which] is a list of resources used to generate a product.” Spec. ¶¶ 1, 3.

Claims 1–3, 5–19, 21, and 22 are pending; of these, claims 1, 10, and 17 are independent. *See* App. Br. 34–42. Claim 1 is reproduced below for reference (emphases added):

1. A product lifecycle management method, the method comprising the following acts performed by a bill of material (BOM) management system in conjunction with a data processing system:

storing on a data processing system data corresponding to multiple sections of a project in an item table that includes item objects, each of the item objects providing an initial description of one or more of the sections;

recording changes to the initial description amongst data entries of a change table, a revision table and a BOM table, wherein the change table, the revision table and the BOM table are separate tables, *wherein the BOM table includes a pointer to the change table, the change table includes a pointer to the revision table*, and the item table is locatable at least via the revision table;

in response to the changes to the initial description, defining change objects indicating variations made to the initial description of the one or more sections of one or more of the item objects including at least one unreleased change to the one or more sections;

receiving a development sequence of the project;

in response to receiving the development sequence of the project, defining relationships between the change objects and the item objects associated with the project and storing change information for the item objects associated with the development sequence, *wherein the pointer from the BOM table to the change table is used as part of the storing of the change information*;

generating a hierarchical data structure from the relationships configured to define a hierarchy relative to an item object of the project;

in response to parameters of a BOM query of the BOM management system, *locating a set of the change objects in the change table via the pointer in the BOM table to the change table*, wherein the set of the change objects corresponds to query parameters of the BOM query;

in response to the locating of the set of the change objects, producing a resolved BOM by processing a set of the change objects that correspond to the query parameters of the BOM query;

determining, from the set of the change objects, properties of the one or more sections from information related to contents of the item table and the change table corresponding to the set of the change objects; and

generating, in accordance with the hierarchical data structure, a visual perceivable representation of the resolved BOM from the information including the properties and information related to the set of the change objects and the at least one unreleased change to the one or more sections,

wherein the storing on the data processing system data, the recording, the defining of the change objects, the receiving of the development sequence, the defining of the relationships, the generating of the hierarchical data structure, the locating of the set of the change objects in the change table, the producing of the resolved BOM, the determining of the properties, the generating of the visual perceivable representation are executed by one or more processors of a computer.

The Examiner's Rejections²

Claims 1–3, 5–19, 21, and 22 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Final Act. 4.

² In the Answer, the Examiner withdraws the obviousness rejection of the claims. *See Ans. 2–3.*

Claims 1–3, 5–19, 21, and 22 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 6.

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellant’s arguments. Arguments Appellant could have made but chose not to make are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv); *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential); *Hyatt v. Dudas*, 551 F.3d 1307, 1313–14 (Fed. Cir. 2008) (the Board may treat arguments Appellant failed to make for a given ground of rejection as waived).

A. 35 U.S.C. § 112

In determining the claims “fail[] to comply with the written description requirement,” the Examiner finds the following limitations are not sufficiently described in the Specification:

1. “Claims 1, 10, and 17, as amended, include limitations indicating that the BOM table includes a pointer to the change table and the change table includes a pointer to the revision table,” and
2. “the independent claims have been amended to indicate that the pointers are used as part of the storing and that pointers are used to locate a set of change objects in response to submitted parameters.”

Final Act. 4–5.

Appellant argues the application includes “[s]upport for ‘the BOM table includes a pointer to the change table and the change table includes a pointer to the revision table,’ [which] can be found at least at Figure 5 and

accompanying description.” App. Br. 13. Appellant further argues that “the pointers as illustrated in the data set 26 of Figure 5 are used as part of the locating and/or storing as discussed in the instant Application as filed.”

Reply Br. 3; *see also* App. Br. 13–14.

We are persuaded by Appellant’s arguments. The Examiner defines “a ‘pointer’ [as] a term of art in the field of computer science,” specifically “an object that references another value stored elsewhere in memory.” Ans. 5. Appellant’s figures 3 and 5 graphically depict (using arrows) the BOM table references the change table, and the change table references the revision table. *See* App. Br. 14. Appellant’s Specification further explains the various tables reference values in each other’s memory, and “[c]hange table 38 includes objects that indicate changes made to descriptions of sections 28-34” and “BOM table 37 points to both item table 36 and change table 38.” Spec. ¶¶ 27, 28; *see also* Spec. ¶¶ 32, 35. The Examiner does not explain how this disclosure is distinguishable from the claimed use of a pointer as understood by one of ordinary skill. *See* MPEP § 2163.04.

Thus, we do not sustain the Examiner’s written description rejection of independent claim 1, of independent claims 10 and 17 which recite similar limitations, or of the claims dependent thereof. *See* Final Act. 4–5.

B. 35 U.S.C. § 101

Appellant argues “[c]laims 1–3, 5–19, 21 and 22 recite statutory subject matter under 35 U.S.C. 101.” App. Br. 16. We are not persuaded the Examiner errs in determining the claims are patent-ineligible, pursuant to the two-step patent-eligibility framework provided in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014)). *See* Ans. 2. We adopt the

Examiner’s reasoning with respect to this rejection, and we add the following for emphasis.

Alice Step One

Appellant argues “[c]laim 1 recites an ‘item table,’ ‘change table,’ ‘revision table’ and a ‘BOM table’ and specific types of processing that occurs with the tables,” (App. Br. 15) such that “the recited embodiments are not abstract within the meaning of *Alice* but rather ‘the claims are specific implementation of a solution to a problem in the software arts’” (Reply Br. 4, citing *Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)). Particularly, Appellant contends the “instant specification describes improvements in processing, such as improving computing time and resource utilization, attributable” to the recited claim limitations. App. Br. 15 (citing Spec. ¶¶ 3, 35).

We are not persuaded the Examiner errs in determining claim 1 is directed to “organiz[ing] BOM data with respect to, at least, sections of a project,” which is “directed to using categories to organize, store, and transmit information, which is an abstract idea.” Final Act. 7. The claimed tables and processing are used to manage a bill of material for a product, which is a fundamental economic practice and which may be done using pen and paper. See Spec. ¶ 3; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson.*”); *Gottschalk v. Benson*, 409 U.S. 63 (1972). Appellant does not show that the claimed method of managing a “vast quantity of information” and allowing for

“efficient querying” is anything other than the use of a computer in its ordinary capacity. App. Br. 15. “[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2359 (“use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions” is not an inventive concept)); *see also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“[M]erely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea.”).

The only similarity with the claims in *Enfish* is the use of tables; however, Appellant does not show the Examiner errs in determining the claims do not provide a technical improvement over commercially available tools. Ans. 10; Spec. ¶¶ 3–5; *see Enfish*, 822 F.3d at 1336. Rather, we agree with the Examiner that, unlike the claims in *Enfish*, the focus of claim 1 is on a business improvement of organizing a bill of materials for a project. *See* Ans. 9–10; Spec. ¶¶ 3–5, 35, 44; *cf. Enfish*, 822 F.3d at 1336 (“the plain focus of the claims is on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity.”).

Accordingly, we determine independent claim 1 fits into the familiar class of claims that do not “focus . . . on [] an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). That is, the claim is directed to an abstract concept, and is

similar to claims our reviewing courts have found to be abstract. *See* Final Act. 7; *see also Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1328, 1330 (Fed. Cir. 2017) (“the heart of the claimed invention lies in creating and using an index to search for and retrieve data . . . an abstract concept,” and “remotely accessing user-specific information is abstract”); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (“The concept of data collection, recognition, and storage is undisputedly well-known”); *Elec. Power Grp.*, 830 F.3d at 1353 (holding that “collecting information, analyzing it, and displaying certain results of the collection and analysis” are “a familiar class of claims ‘directed to’ a patent-ineligible concept”).

Alice Step Two

We also agree with the Examiner that claim 1 “do[es] not include limitations amounting to significantly more than the abstract idea” under step two of the *Alice* framework. Final Act. 8. As discussed above, we agree with the Examiner that the claim does not improve the underlying, or other, technology. *See* Ans. 9–12; *see also* Spec. ¶¶ 23, 25, 46–49. In response to the Examiner’s determination, Appellant provides a conclusory argument that the claims are not generic and well known, which is insufficient to show the Examiner errs. Reply Br. 4–5; *cf. SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (“[M]ere statements of disagreement . . . do not amount to a developed argument.”).

Appellant, further, explains that the claimed pointer structures are well understood by those of ordinary skill in the art and that commercial

tools are currently available to manage BOMs. Reply Br. 2 (“Appellant notes that one of ordinary skill in the art would reasonably understand the arrows depicted in Figures 3 and 5 could be implemented as pointers.”), Reply Br. 3 (“To facilitate managing the vast quantity of information that may be associated with BOMs, several commercially available tools are available”); *see also* page 3 of the USPTO Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*), April 19, 2018 (“A specification demonstrates the well-understood, routine, conventional nature of additional element(s) . . . in a manner that indicates that the additional elements are sufficiently well-known that the specification does not need to describe the particulars of such additional elements to satisfy 35 U.S.C. § 112(a).”). Such well-known and routine elements are not enough to transform the claim into a patent-eligible application. *Alice*, 134 S. Ct. at 2360.

Accordingly, we are not persuaded the Examiner errs in determining claim 1 is “directed to an abstract idea without including additional elements amounting to significantly more than the abstract idea.” Ans. 12. We sustain the Examiner’s rejection of claim 1 under 35 U.S.C. § 101. Appellant does not separately argue the remaining claims (*see* App. Br. 14–16); thus, we sustain the Examiner’s rejection of claims 2, 3, 5–19, 21, and 22 under 35 U.S.C. § 101 for the same reasoning.

DECISION

The Examiner's decision rejecting claims 1–3, 5–19, 21, and 22 under 35 U.S.C. § 112, first paragraph is reversed.

The Examiner's decision rejecting claims 1–3, 5–19, 21, and 22 under 35 U.S.C. § 101 is affirmed.

The Examiner's decision is affirmed because we have affirmed at least one ground of rejection with respect to each claim on appeal. *See* 37 C.F.R. § 41.50(a)(1).

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).

AFFIRMED