UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS H. BLUHM, GREGORY A. LYNCH,
and YUNG S. KIM

Appeal 2017-003718
Application 11/735,874[1]
Technology Center 3600

Before ALLEN R. MACDONALD, JON M. JURGOVAN, and
ADAM J. PYONIN, *Administrative Patent Judges*.

PYONIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from a final

rejection of claims 1–5, 8–12, 15, 16, and 19, constituting all of the pending

claims. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] The Boeing Company is identified as the real party in interest. App. Br. 2.

STATEMENT OF THE CASE

Introduction

The Application is directed to "a computer implemented method, apparatus, and computer usable program code for protecting and exchanging business process models between environments using differing process model authoring systems." Spec. ¶ 1. Claims 1, 9, and 16 are independent. Claim 1 is reproduced below for reference (emphasis added):

> 1. A computer implemented method for creating an aerospace apparatus, the computer implemented method comprising:
>
> parsing a file into component parts, the file including exchange process model data;
>
> identifying, by a processor, a set of information requirements for exchanging process model data between process authoring tools using different process model exchange formats within a process management system, wherein the process authoring tools are tools for creating the process for defining the aerospace apparatus, the process model data including data derived from an aircraft airframe definition process model having design processes for an aircraft airframe;
>
> extending, by the processor, a definition of a common process model exchange format to include a set of common objects using the set of information requirements and adding the set of common objects to the definition of the common process model exchange format using the set of information requirements to form the common process model exchange format, wherein the set of common objects are supported between a source process authoring tool and a target process authoring tool in the process authoring tools, the target process authoring tool for testing or manufacturing the aerospace apparatus, and wherein the file comprises an imported file that was originated by an entity using a different target process authoring tool than the source process authoring tool associated with a requester;

excluding classes, relationships, and objects from exchange process model data that are not compliant with a defined common format;

populating a relational database with the set of common objects, wherein the set of common objects are found in process definition files associated with the source process authoring tool and the target process authoring tool;

generating, by the processor, an output file using the common process model exchange format, wherein the common process model exchange format is compatible with a process model exchange format used by the target process authoring tool, wherein the output file comprises a master process model exchange format that is independent of formats of the process authoring tools and the target process authoring tool; and

testing or manufacturing the aerospace apparatus by using the process authoring tool, wherein the process authoring tool uses the output file in testing or manufacturing the aerospace apparatus, wherein the target process authoring tool uses the process model exchange format that is different than the source process authoring tool, and wherein the aerospace apparatus comprises one of a part, a piece, a component, an assembly, a machine, or equipment associated with the aircraft airframe.

The Examiner's Rejection

Claims 1–5, 8–12, 15, 16, and 19 stand rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. See Final Act. 6.

ANALYSIS

Appellants do not separately argue the claims. *See* App. Br. 22. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

We have reviewed the Examiner's rejections in light of Appellants' arguments. We are not persuaded of Examiner error; we adopt the Examiner's findings and conclusions as our own, and we add the following

primarily for emphasis. Any arguments Appellants could have raised but chose not to raise in the Briefs are deemed waived. *See In re Jung*, 637 F.3d 1356, 1366 (Fed. Cir. 2011) ("it has long been the Board's practice to require an applicant to identify the alleged error in the examiner's rejections").

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (internal citation and quotation marks omitted). The Supreme Court, in Alice, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66, 79 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355. The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," e.g., to an abstract idea. *Id.* If the claims are directed to a patent-ineligible concept, the inquiry proceeds to the second step, where the elements of the claims are considered 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, 78–79).

Analyzing the claims under step one of the two-step framework laid out in *Alice*, the Examiner determines claim 1 is directed to "the concept of generating a common process model (an idea of itself, etc.) which is an

example identified by the courts as an abstract idea" (Final Act. 7), as the claim recites "collecting and comparing known information, comparing new and stored information and using rules to identify options" (Final Act. 8). Proceeding with step two of the *Alice* framework, the Examiner "concludes that there are no meaningful limitations in the claims that transform the judicial exception into a patent eligible application such that the claim amounts to significantly more than the judicial exception itself." Final Act. 10.

Appellants argue the Examiner's rejection is in error, because "the claim is directed to manufacturing or performing maintenance on an aerospace apparatus," and "the claim itself provides for improvements to an aerospace apparatus based on the [] computer implemented steps." App. Br. 12. Appellants further argue that, due the recited "actual physical process," claim 1 is analogous to the claims found patentable by the Supreme Court in *Diamond v. Diehr* and as discussed in *Alice*. App. Br. 14; *see also* App. Br. 13–18; *Diamond v. Diehr*, 450 U.S. 175 (1981).

We are unpersuaded by Appellants' arguments; we discuss each step of the rejection with respect to the *Alice* framework, below.

A.   Alice Step One

We find the Examiner did not err in concluding the claims are directed to a judicially-recognized abstract idea. Claim 1 recites parsing a file, identifying requirements for exchanging data between "process authoring tools," analyzing and calculating data, creating database information and a file, and then "testing or manufacturing the aerospace apparatus using the process authoring tool" and the created file. That is, the steps of claim 1

collect information, analyze and manipulate the information, and output the information. *See* Ans. 13–14; *see also* Spec. ¶ 38 ("the illustrative embodiments provide a common method for protecting data during data exchange that is independent of the process model toolset used."). We agree with the Examiner that the claim is directed to an idea of itself. *See* Final Act. 7–8.

Appellants' arguments with respect to step one of the Alice framework rely on the "recit[ation of] an invention that requires the manufacture or maintenance of [an] aerospace apparatus." App. Br. 18; *see also, e.g.,* App. Br. 14, 17. Appellants' arguments, however, do not persuade us the Examiner erred in determining claim 1 is drawn to the abstract idea of generating a common process model. *See* Ans. 6; *see also Alice,* 134 at 2358 (explaining that *Diehr's* computer-implemented process for curing rubber is analyzed under step two of the Alice framework); Example 25 of the Guidelines in the July 2015 Update to Subject Matter Eligibility, https://www.uspto.gov/sites/default/files/ documents/ieg-july-2015-app1.pdf (stating the claims of Example 25 are directed to abstract ideas); *see also in In re Brown,* 645 F. App'x 1014, 1016–17 (Fed. Cir. 2016).

We agree with the Examiner, moreover, that Appellants' arguments are not commensurate in scope with the claim. *See* Ans. 10 ("there are no claimed limitations that require manufacturing or maintenance on an aircraft. . . . the claims merely require the testing <u>or</u> manufacturing of the aerospace apparatus."). Claim 1 recites the testing or manufacturing is "by using the process authoring tool," which is one of the "tools for creating the process for defining the aerospace apparatus." Appellants' Specification provides

that "[a] process may be performed by a human . . . or a combination of a human, a computer system, and/or an application" (Spec. ¶ 29) and process authoring tools "include[] one or more applications or software tools for generating, manipulating, modifying, and utilizing design processes 310 and/or process models 312" (Spec. ¶ 45). *See* Figs. 1–2, Spec. ¶ 118. The Specification further explains that "[s]ome data associated with the various processes for designing, testing, and manufacturing may be . . . data in a system that supports *simulation* so that cost and duration are modeled." Spec. ¶ 57 (emphasis added). In light of the Specification, we agree with the Examiner that claim 1 is directed to manipulating data rather than any physical processes. *See* Ans. 12, 15.

Based on the record before us, we are not persuaded the Examiner erred in concluding claim 1 is drawn to an idea of itself, and is comparable to concepts our reviewing courts have found to be abstract. *See* Final Act. 7–8; *see also 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. LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (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"); *Brown*, 645 F. App'x 1014 (holding abstract the claimed assigning hair designs to balance head shape); *see also Application of Sarkar*, 588 F.2d 1330 (CCPA 1978) (holding a claimed technique for modeling an open channel, e. g., a natural stream or artificial waterway, is patent ineligible); *Application of Gelnovatch*, 595

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F.2d 32, 33 (C.C.P.A. 1979) (holding a process for determining a set of values for use in a model of a microwave circuit was not patentable).

Accordingly, we agree with the Examiner that claim 1 is directed to an abstract idea. See Final Act. 3–5.

B.   *Alice Step Two*

Regarding step two of the Alice framework, Appellants do not persuasively show the Examiner errs in determining claim 1 "do[es] not amount to significantly more than an abstract idea." Final Act. 5. As discussed above, Appellants' reliance on "actually manufacturing or performing maintenance on an aircraft" is inapposite, as the claims do not recite such steps. App. Br. 15; *see also* Ans. 12.

Further, to the extent the claims require manufacturing or testing the aerospace apparatus, we find such limitations to be insignificant post-solution activity. Claim 1 solves the problem of exchanging data among various entities that use "a variety of process authoring tools." Spec. ¶ 8; *see also* Spec. ¶ 38. Adding limitations that the data exchange is used for a specific purpose does not convert the otherwise ineligible concept into an inventive concept. *See, e.g., Intellectual Ventures I LLC v. Erie Indent. Co.,* 850 F.3d 1315, 1328–29 (Fed. Cir. 2017) ("[w]hile limiting the index to XML tags certainly narrows the scope of the claims, in this instance, it is simply akin to limiting an abstract idea to one field of use or adding token post solution components that do not convert the otherwise ineligible concept into an inventive concept"); *see also* Mayo, 566 U.S. at 72–73 ("[T]he prohibition against patenting abstract ideas cannot be circumvented by . . . adding insignificant post-solution activity") (internal citations and

quotation marks omitted); *Brown*, 645 at 1016 ("[T]he central purpose of the claimed method is the process before cutting, and . . . the hair-cutting step constitutes 'insignificant post-solution activity.'"); *see also* Spec. ¶ 2 ("An enterprise is frequently composed of multiple business sites, departments, computer systems, networks, and other resources that are used for the purpose of creating, analyzing, producing, testing, and/or delivering products to customers.").

Accordingly, we are not persuaded the Examiner errs in finding the claims are patent ineligible pursuant to step two of the Alice framework.

C.   *Preemption*

Appellants also argue "Applicant is not attempting to preempt the field of associative memories, but is limiting the claim to the much smaller field of aircraft manufacturing and maintenance." App. Br. 14.

We are unpersuaded of Examiner error. As discussed above, limiting the claims to a specific field of use does not transform the claim into patentable subject matter. Further, preemption is not the sole test for patent eligibility, and any questions on preemption in the instant case have been resolved by the above analysis. As our reviewing court has explained: "questions on preemption are inherent in and resolved by the § 101 analysis," and, although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *cf. OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) ("[T]hat the claims do not preempt all price

optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.").

DECISION

The Examiner's decision rejecting claims 1–5, 8–12, 15, 16, and 19 is affirmed.

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).

<u>AFFIRMED</u>