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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PHILIPPE NGUYEN, SÉVERINE BAUDRY,  
and CORINNE NATUREL

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Appeal 2016-008160<sup>1</sup>  
Application 12/086,373  
Technology Center 3600

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Before JOHNNY A. KUMAR, JASON J. CHUNG, and TERRENCE W.  
MCMILLIN, *Administrative Patent Judges*.

KUMAR, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final Rejection of claims 1–8 and 10–20. Claim 9 has been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> The Appellants name Thomson Licensing as the real party in interest. *See* App. Br. 3.

*Invention*

The disclosed and claimed invention on appeal relates to “a method of watermarking a data set.” Spec. 2, ll. 4–5.

*Representative Claim*

1. A method of watermarking a data set comprising:
  - first transforming of at least one group of data of the said set by a first transform into a first group of coefficients in a first transformation space;
  - first watermarking of said first group of coefficients according to a predetermined watermarking process using a first hardware watermarking module;
  - generating a first group of watermarking data representing the modifications induced by the said first step of watermarking on coefficients of the said first group of coefficients in said first transformation space;
  - first projection of said first group of watermarking data from said first transformation space into a second transformation space different from said first transformation space to generate a second group of watermarking data;
  - second transforming of said at least one group of data by a second transform into a second group of coefficients in said second transformation space; and
  - second watermarking of said second group of coefficients with said second group of watermarking data using a second hardware watermarking module.

*Rejections*

A. Claims 1–8 and 10–20 are rejected under 35 U.S.C. § 101 as being directed to a judicial exception.

B. Claims 1–8 and 10–20 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

*Grouping of Claims*

Based on Appellants' arguments (App. Br. 9–14), we decide the appeal of rejections A and B of claims 1–8 and 10–20 on the basis of representative claim 1.

ANALYSIS

We have considered all of Appellants' arguments and any evidence presented. Regarding rejection A, we disagree with Appellants' arguments and we adopt as our own: (1) the findings and legal conclusions set forth by the Examiner in the Non-Final Office Action (*id.* at 2–8), from which this appeal is taken, and (2), the corresponding findings, legal conclusions, and explanations for rejection A, as set forth in the Answer (*id.* at 9–13), in response to Appellants' arguments. App. Br. 9–12. However, we reverse rejection B under § 112, first paragraph, for the reasons discussed *infra*. We highlight and address specific findings and arguments for emphasis in our analysis below.

*Rejection A under § 101 of Claims 1–8 and 10–20*

**Issue 1:** Under § 101, did the Examiner err in concluding claim 1 is directed to patent-ineligible subject matter?<sup>2</sup>

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 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, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.

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<sup>2</sup> We consider the claims as a whole and give the claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal quotation marks omitted)). In *Alice*, the Supreme Court set 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.” *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

The first step in our analysis is to determine whether the claims at issue are directed to a patent-ineligible concept, such as an abstract idea. *See Alice*, 134 S. Ct. at 2355. If the claims are directed to a patent-ineligible concept, the second step in the analysis is to “consider the elements of each claim both 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).

In rejecting claims 1–8 and 10–20, the Examiner finds (1) the claims are directed to “an abstract idea involving a mathematical algorithm” (e.g., watermarking a dataset), “consisting of mathematical operations where the transforming and projection operations would involve matrix arithmetic and the generation of watermarking data” and that (2) the additional elements in the claims do not amount to significantly more than the abstract idea because

these claims require no “more than generic computer functionality.” Non-Final Act. 3–4.

***Alice* — Step One**

Turning now to the first step of the *Alice* inquiry, Appellants argue claim 1 “protects a data set by modifying the data by inserting a watermark” and, as such, does not “recite any mathematical relationship or any other category of abstract idea.” App. Br. 10–11. Appellants’ argument is not persuasive. Reply Br. 5–6. Contrary to Appellants’ argument, claim 1 is directed to an abstract idea involving mathematical calculations on certain data. As correctly recognized by the Examiner, “claim 1 is clearly directed towards a judicial exception regarding an abstract idea involving an algorithm for the transforming and watermarking of data.” Ans. 11. *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350–51 (Fed. Cir. 2014) (holding that “a process of organizing information through mathematical correlations . . . not tied to a specific structure or machine” is an abstract idea).

In the Reply Brief, Appellants further argue:

Applicants respectfully assert that media playback (and, necessarily therefore, rights management and watermarking) is a core functionality of modern computers. The present invention provides improvements to watermarking and, thus also, to the functioning of the computer itself. It is therefore respectfully submitted that the present claims are not directed to an abstract idea at all.

*Id.* at 6 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)).

We disagree. Contrary to Appellants' argument, claim 1 does not recite a specific improvement to the way computers operate, and Appellants do not present evidence to establish these claims recite a specific improvement to the computers. *See Enfish*, 822 F.3d at 1336, 1339. Appellants also have not demonstrated their claims “improve the way a computer stores and retrieves data in memory,” as the claims in *Enfish* did via a “self-referential table for a computer database” (*see Enfish*, 822 F.3d at 1336, 1339). Instead, we agree with the Examiner that claim 1

takes inputted data, transforms the data into coefficients, watermarks the coefficients and then generates watermarking data. The watermarking data is then projected into a second transformation space, a second transform is performed and a second watermarking is performed. Per the disclosure at pages 10 and 11 each of these operations can be described as a mathematical operation. The claim can also be viewed as similar in nature to *Digitech (Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.)*, 111 USPQ2d 1717 (Fed. Cir. 2014) as *Digitech* was held to be directed towards a process of taking two data sets and combining them into a single data set, the device profile.

Ans. 9–10.

For at least these reasons, we conclude representative claim 1 is directed to an abstract idea (*Alice* — Step One).

### ***Alice* — Step Two**

In the second step of the *Alice* analysis, Appellants contend, *inter alia*:

[T]he watermark need not be used by any downstream hardware or process to be useful. Instead, the mere existence of the watermark helps prevent unauthorized copying and has other significant benefits. Indeed, in the case of tracking the source of a leak, it is the explicit hope of the person adding the watermark that the watermark never be needed in any capacity. In this manner, the watermark of the present invention provides a

significant advance in the data protection and anti-counterfeiting industries. As such, the claims do indeed provide “significantly more” than an abstract idea, as improvements to the watermarking of data represent significant advances to another industry.

App. Br. 11–12.

However, we conclude the *nature* of Appellants’ claims is not *transformed* into a patent-eligible application of the abstract idea presented, because these claims do nothing more than simply instruct the practitioner to implement an abstract idea of mathematical calculations using a generic processor. We conclude Appellants’ representative claim 1 is directed to a patent-ineligible abstract concept, and does not recite something “significantly more” under the second step of the *Alice* analysis. Accordingly, for the reasons discussed above, we sustain the Examiner’s rejection A under 35 U.S.C. § 101 of representative claim 1, and grouped claims 2–8 and 10–20, as being directed to patent-ineligible subject matter in light of *Alice* and its progeny. *See Grouping of Claims, supra*.

*Rejection B under pre-AIA § 112, first paragraph (written description)*

Our reviewing court guides the written description “must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (internal citation and quotations omitted). The test is whether the disclosure “conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* “[A]ctual ‘possession’ or reduction to practice outside of the specification is not enough. Rather, . . . it is the specification itself that must demonstrate possession.” *Id.* at 1352; *see also PowerOasis, Inc. v. T-*

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*Mobile USA, Inc.*, 522 F.3d 1299, 1306–07 (Fed. Cir. 2008) (explaining that § 112, first paragraph, “requires that the written description *actually* or *inherently* disclose the claim element”) (emphasis added).

[I]t is “not a question of whether one skilled in the art *might* be able to construct the patentee’s device from the teachings of the disclosure . . . . Rather, it is a question whether the application *necessarily discloses* that particular device.” . . . A description which renders obvious the invention for which an earlier filing date is sought is not sufficient.

*Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (quoting *Jepson v. Coleman*, 314 F.2d 533, 536 (CCPA 1963)) (emphasis added).

In the Non-Final Office Action (*id.* at 8–12), the Examiner finds insufficient written description support for the claims 1, 19, and 20 language: “**hardware watermarking module**” because “no actual description of any ‘physical entity’ is present in the disclosure (emphasis added).

Appellants disagree, and contend, *inter alia*:

The specification does describe an option for the modules as being “physically distinguishable units” and “physical entities” on page 16, lines 4–13, and these units are therefore clearly *physical* devices—how else could they be physically distinguishable? It is therefore supported to have *hardware* modules . . . those having ordinary skill in the art would nonetheless recognize that the inventors had possession of *hardware* embodiments.

(Reply Br. 7).

As indicated by Appellants (*id.*), we find at least page 16, lines 4–13 of the original Specification ties the invention to “physical units” and

“physical entities” to provide support for the contested hardware watermarking module.

Therefore, on this record, we find a preponderance of the evidence supports Appellants’ contentions traversing written description rejection B. App. Br. 10–12; Reply Br. 7. Accordingly, we reverse Rejection B of claims 1–8 and 10–20, under the written description requirement.

#### DECISION

We affirm the Examiner’s rejection A of claims 1–8 and 10–20 under 35 U.S.C. § 101.

We reverse the Examiner’s rejection B of claims 1–8 and 10–20 under pre-AIA 35 U.S.C. § 112, first paragraph (written description).

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED