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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOMOYUKI ONO, NARUMI NAGASE,
TAKAYASU KON, and KEI YAMASHITA

Appeal 2017-004595
Application 13/405,949¹
Technology Center 2800

Before JEREMY J. CURCURI, JUSTIN BUSCH, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge*
JEREMY J. CURCURI.

Opinion Dissenting-in-part filed by *Administrative Patent Judge*
JUSTIN BUSCH.

CURCURI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–17. Non-Final Act. 1. The case was heard on November 14, 2018. We have jurisdiction under 35 U.S.C. § 6(b).

¹ According to Appellants, the real party in interest is Sony Corporation. App. Br. 2.

Claims 1–13 and 17 are rejected under pre-AIA 35 U.S.C. § 112, second paragraph, as indefinite. Non-Final Act. 24–30; *see also* Ans. 2 (withdrawing the rejection of claims 14 and 16).

Claims 1–13 are rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Non-Final Act. 30–43; *see also* Ans. 2 (withdrawing the rejection of claims 14 and 16).

Claims 1–17 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more. Non-Final Act. 43–49.

We affirm-in-part.

STATEMENT OF THE CASE

Appellants’ invention relates to “an energy charging apparatus, an energy saving apparatus, an energy consuming apparatus, and a method of managing green energy.” Spec. ¶ 2. Claim 1 is illustrative, and reproduced below.

1. An energy charging apparatus comprising:
 - an energy charging unit charging green energy received from a green energy source in an energy saving apparatus;
 - a measured amount information acquisition unit acquiring measured amount information that indicates a charged amount of green energy measured by the energy saving apparatus; and
 - a certificate issuance unit (i) comparing a charged amount of green energy charged by the energy charging unit with the charged amount of green energy shown in the measured amount information, (ii) issuing a certificate for certifying an amount of green energy charged in the energy saving apparatus if the charged amount of green energy charged by the energy charging unit coincides with the charged amount of green energy shown in the measured amount information,

and (iii) not issuing the certificate if the charged amount of green energy charged by the energy charging unit does not coincide with the charged amount of green energy shown in the measured amount information,

wherein the certificate is managed in association with the energy saving apparatus and is discarded if the amount of green energy that is certified by the corresponding certificate is output from the energy saving apparatus.

PRINCIPLES OF LAW

We review the appealed rejections for error based upon the issues identified by Appellants, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

ANALYSIS

THE INDEFINITENESS REJECTION OF CLAIMS 1–13 AND 17

The Examiner concludes claims 1–13 and 17 are indefinite. Non-Final Act. 24–30; *see also* Ans. 2 (withdrawing the rejection of claims 14 and 16). In particular, the Examiner concludes claims 1–13 and 17 recite various limitations that invoke pre-AIA 35 U.S.C. § 112, sixth paragraph, and the written description fails to recite corresponding structure, material, or acts for the claimed functions. Non-Final Act. 24–30; *see also* Ans. 18–23.

Claim 1-Contentions

The Examiner concludes the “measured amount information acquisition unit” as recited in claim 1 invokes pre-AIA 35 U.S.C. § 112, sixth paragraph, and the written description fails to recite corresponding structure, material, or acts for the claimed functions. Non-Final Act. 24; *see also* Ans. 19 (withdrawing conclusions of indefiniteness with respect to the

“energy charging unit” and the “certificate issuance unit” as recited in claim 1, and explaining the “Examiner cannot determine if a structure for the limitation ‘a measured amount information acquisition unit’ is an actual device or software.”).

Appellants present the following principal arguments:

i. “[T]he above terms are not means-plus-function terms because the above terms are not recited with ‘means’ language.” App. Br. 25.

ii. “[T]he above terms are not means-plus-function terms because the structure in the terms can be determined from the terms themselves.” App. Br. 25.

iii. “[E]ven if the above terms are determined to invoke 35 U.S.C. § 112, para. 6 (which Appellants do not agree), there is sufficient structure described in Appellants’ specification such that Claim 1 should not be rejected under 35 U.S.C. § 112.” App. Br. 26. “Appellants disclose that a measured amount acquisition unit can include a device that measures the amount of energy charged by the energy charging unit. (See, e.g., Appellants’ specification, page 9, paragraphs [0052] to [0054].)” App. Br. 26; *see also* Reply Br. 12.

Claim 1-Our Review

Generic terms such as “mechanism,” “element,” “device,” and other “nonce words” used in a claim can also be considered as a substitute for the “means-plus-function” limitation and, as such, may invoke the application of pre-AIA 35 U.S.C. § 112, sixth paragraph, even without reciting the term “means,” because these generic terms or nonce words “typically do not connote sufficiently definite structure.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (en banc).

Claim 1 recites “measured amount information acquisition unit acquiring measured amount information that indicates a charged amount of green energy measured by the energy saving apparatus.” We conclude the generic term “unit” is a nonce word, and invokes pre-AIA 35 U.S.C. § 112, sixth paragraph.

Appellants’ Specification discloses

The energy input unit 121 is an input terminal for inputting green energy that is generated by the green energy generation apparatus 11. Further, the energy input unit 121 is connected to the energy amount measurement unit 122. Through this, the energy input to the energy input unit 121 is input to the energy amount measurement unit 122. If the energy is input, the energy amount measurement unit 122 measures the amount of the input energy (hereinafter, charged amount). Further, the energy amount measurement unit 122 inputs charged amount information to the certificate issuance determination unit 125.

Further, the energy amount measurement unit 122 is connected to the energy output unit 123. Through this, the energy input to the energy amount measurement unit 122 is input to the energy output unit 123. The energy output unit 123 is an output terminal for outputting the energy. For example, if the energy saving apparatus 13 is connected to the energy output unit 123, the energy input to the energy output unit 123 is output toward the energy saving apparatus 13.

The signature verification unit 124 is a constituent element that verifies an electronic signature. For example, when an electronic signature is acquired from the energy saving apparatus 13, the signature verification unit 124 verifies the electronic signature using a public key of the energy saving apparatus 13. *As described hereinafter, the energy saving apparatus 13 measures an amount of energy (hereinafter, saved amount) that is supplied from the energy charging apparatus 12, and provides saved amount information with an electronic signature attached thereto to the energy charging apparatus 12.*

Accordingly, the signature verification unit 124 verifies that the provided saved amount information is information that is indeed provided from the energy saving apparatus 13.

Spec. ¶¶ 52–54 (emphasis added).

Thus, Appellants' Specification merely describes providing the measured amount of energy (saved amount) to the energy charging apparatus. *See* Spec. ¶ 54. To the extent the energy charging apparatus acquires the saved amount that is provided to it, we do not readily see any corresponding structure, material, or acts for the claimed function of “acquiring measured amount information that indicates a charged amount of green energy measured by the energy saving apparatus” as recited in claim 1. Thus, we conclude the term “measured amount information acquisition unit” is indefinite.

We, therefore, sustain the Examiner's rejection of claim 1.

Claim 5-Contentions

The Examiner concludes the “energy input unit,” “energy output unit,” “certificate issuance unit,” “certificate acquisition unit,” “certificate preservation unit,” and “certificate discard unit” as recited in claim 5 invoke pre-AIA 35 U.S.C. § 112, sixth paragraph, and the written description fails to recite corresponding structure, material, or acts for the claimed functions. Non-Final Act. 25–26; *see also* Ans. 21–22 (withdrawing conclusions of indefiniteness with respect to the “energy saving unit” recited in claim 5, and explaining the “Examiner cannot determine from the disclosure if the structures . . . are actual device or software.”).

Appellants present the following principal arguments:

i. “[T]he above terms are not means-plus-function terms because the above terms are not recited with ‘means’ language.” App. Br. 27.

ii. “[T]he above terms are not means-plus-function terms because the structure in the terms can be determined from the terms themselves.”

App. Br. 28.

iii. “[E]ven if the above terms are determined to invoke 35 U.S.C. § 112, para. 6 (which Appellants do not agree), there is sufficient structure described in Appellants’ specification such that Claim [5] should not be rejected under 35 U.S.C. § 112.” App. Br. 28.

[T]he energy input and output units can be input/output terminals and can further include a switch that allows the energy to be input or output. (See, e.g., Appellants’ original specification, page 37, paragraph [0174]; page 9, paragraphs [0053], [0054]; page 10, paragraph [0059]; page 11, paragraphs [0062], [0063]; page 17, paragraphs [0088], [0089]). The certificate issuance unit, certificate acquisition unit, certificate preservation unit and certificate discard unit are devices that handle the certificate itself. (See, e.g., Appellants’ specification, page 10, paragraphs [0067]; pages 11 and 12, paragraphs [0065]; [0066].)

App. Br. 28–29; *see also* Reply Br. 11–12.

Claim 5-Our Review

Claim 5 recites “energy input unit,” “energy output unit,” “certificate issuance unit,” “certificate acquisition unit,” “certificate preservation unit,” and “certificate discard unit.” We conclude the generic term “unit” is a nonce word, and invokes pre-AIA 35 U.S.C. § 112, sixth paragraph.

The Examiner withdrew the conclusion of indefiniteness with respect to the “certificate issuance unit” as recited in claim 1. Ans. 19. Accordingly, on the record before us in this proceeding, we withdraw the conclusion of indefiniteness with respect to the “certificate issuance unit” as recited in claim 5. *See* Ans. 19.

The Examiner withdrew the conclusion of indefiniteness with respect to the “energy charging unit” as recited in claim 1. Ans. 19. Accordingly, on the record before us in this proceeding, we withdraw the conclusion of indefiniteness with respect to the “energy input unit” and the “energy output unit” as recited in claim 5. *See* Ans. 19; *see also* Spec. ¶¶ 52–53 (“The energy output unit 123 [of the energy charging apparatus] is an output terminal.”), ¶¶ 62–63 (The energy input unit 131 [of the energy saving apparatus] is an input terminal . . . the energy output unit 136 [of the energy saving apparatus] is an output terminal.).

Regarding the “certificate acquisition unit,” the “certificate preservation unit,” and the “certificate discard unit” as recited in claim 5, Appellants’ Specification discloses

energy charging apparatus 12 provides the issued certificate to the energy saving apparatus 13. If the certificate issued by the energy charging apparatus 12 is acquired, the energy saving apparatus 13 stores the acquired certificate in the certificate preservation unit 135. The certificate preservation unit 135 preserves the stored certificate.

Spec. ¶ 65. Appellants’ Specification further discloses “The certificate discard unit 137 that has received this notification discards the certificate stored in the certificate preservation unit 135.” Spec. ¶ 66.

To the extent the energy saving apparatus acquires the certificate, the certificate preservation unit preserves the certificate, and the certificate discard unit discards the certificate, we do not readily see any corresponding structure, material, or acts for the claimed functions recited in claim 5. Thus, we conclude the terms “certificate acquisition unit,” “certificate preservation unit,” and “certificate discard unit” are indefinite.

We, therefore, sustain the Examiner’s rejection of claim 5.

Claim 6-Contentions

The Examiner concludes the “measurement unit,” “certificate acquisition unit,” and “certificate issuance unit” as recited in claim 6 invoke pre-AIA 35 U.S.C. § 112, sixth paragraph, and the written description fails to recite corresponding structure, material, or acts for the claimed functions. Non-Final Act. 19–20; *see also* Ans. 23 (“Examiner cannot determine from the disclosure if the structures . . . are actual device or software.”).

Appellants present the following principal arguments:

i. “[T]he above terms are not means-plus-function terms because the above terms are not recited with ‘means’ language.” App. Br. 30.

ii. “[T]he above terms are not means-plus-function terms because the structure in the terms can be determined from the terms themselves.” App. Br. 30.

iii. “[E]ven if the above terms are determined to invoke 35 U.S.C. § 112, para. 6 (which Appellants do not agree), there is sufficient structure described in Appellants’ specification such that Claim [6] should not be rejected under 35 U.S.C. § 112.” App. Br. 30.

Appellants disclose that a measurement unit can include a device that measures the amount of energy charged by the energy charging unit. (See, e.g., Appellants’ specification, page 9, paragraphs [0052] to [0054].) The certificate issuance unit and certificate acquisition unit are devices that handle the certificate itself. (See, e.g., Appellants’ specification, page 10, paragraphs [0067]; pages 11 and 12, paragraphs [0065]; [0066].)

App. Br. 30; *see also* Reply Br. 11–12.

Claim 6-Our Review

Claim 6 recites the “measurement unit,” “certificate acquisition unit,” and “certificate issuance unit.” We conclude the generic term “unit” is a nonce word, and invokes pre-AIA 35 U.S.C. § 112, sixth paragraph.

The Examiner withdrew the conclusion of indefiniteness with respect to the “certificate issuance unit” as recited in claim 1. Ans. 19. Accordingly, on the record before us in this proceeding, we withdraw the conclusion of indefiniteness with respect to the “certificate issuance unit” as recited in claim 6. *See* Ans. 19.

Regarding the “measurement unit” recited in claim 6, Appellants’ arguments are the same as Appellants’ arguments with respect to the “measured amount information acquisition unit” recited in claim 1. For the same reasons discussed above, we conclude the term “measurement unit” is indefinite.

Regarding the “certificate acquisition unit” recited in claim 6, Appellants’ arguments are the same as Appellants’ arguments with respect to the “certificate acquisition unit” recited in claim 5. For the same reasons discussed above, we conclude the term “certificate acquisition unit” is indefinite.

We, therefore, sustain the Examiner’s rejection of claim 6.

Claim 2–4, 7–13, and 17

We sustain the Examiner’s rejection of claims 2–4, 7–13, and 17 because these claims are not separately argued with particularity. *See* App. Br. 24–35; *see also* Reply Br. 9–13.

THE WRITTEN DESCRIPTION REJECTION OF CLAIMS 1–13

The Examiner finds claims 1–13 fail to comply with the written description requirement. Non-Final Act. 30–43.

Appellants argue claims 1, 5, and 6 with particularity. *See* App. Br. 25–31; *see also* Reply Br. 9–13.

We have sustained the Examiner’s indefiniteness rejection of claims 1–13 because we concluded that various terms in those claims are nonce terms equivalent to reciting a “means” and we found no supporting structure disclosed in the Specification. Because the Specification merely restates the functions associated with the respective means plus functions terms, the Specification does not describe corresponding structure. Without disclosure of corresponding structure, we find those indefinite terms also fail to comply with the written description requirement. *See* MPEP § 2181 (IV) (“a mere restatement of the function in the specification without more description of the means that accomplish the function would also likely fail to provide adequate written description under section 112(a)”).

We, therefore, sustain the Examiner’s written description rejection of claims 1–13.

THE 35 U.S.C. § 101 REJECTION OF CLAIMS 1–17

Contentions

The Examiner concludes

Regarding to claim 1, 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. Claim 1 is directed to an abstract idea of “*comparing a charged amount of green energy charged by the energy charging unit with the charged amount of green energy shown in the*”

measured amount information, (ii) issuing a certificate for certifying an amount of green energy charged in the energy saving apparatus if a the charged amount of green energy charged by the energy charging unit coincides with the charged amount of green energy shown in the measured amount information and (iii) not issuing the certificate if the charged amount of green energy charged by the energy charging unit does not coincide with the charged amount of green energy shown in the measured amount information". The practice of issuing and handling such certificates can also be considered as a fundamental economic practice and a method of organizing human activity.

The claim does not include additional elements that are sufficient to amount significantly more than the judicial exception because "*an energy charging unit, a measured amount information acquisition unit, a certificate issuance unit, an energy saving apparatus*" are recited in very generic ways (the units are described in the specification in generic ways that one cannot determine if the devices are real world devices or functional block such as software unit) and are generic devices that perform data gathering or outputting functions. These are generic functions that are well-understood, routine, and conventional activities previously known to the industry. The claim does not amount to significantly more than the underlying abstract idea of handling/issuing certificates. Accordingly, claim 1 is not patent eligible.

Non-Final Act. 43–44; *see also* Non-Final Act. 44–49 (discussing claims 2–17).

The Examiner further concludes the claimed invention is similar to creating a contractual relationship in *buySAFE*², hedging in *Bilski*³, and

² *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014).

³ *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010).

comparing new and stored information and using rules to identify options in *Smartgene*⁴. Ans. 3–4; *see also* Ans. 5–6 (discussing “significantly more”).

Among other arguments, Appellants present the following principal argument:

The claims are not directed to an abstract idea. *See* App. Br. 13–15; *see also* Reply Br. 6–7 (discussing *McRo*⁵, *buySAFE*, *Bilski*, and *Smartgene*). “The Office provides no analysis, nor does it provide any evidence to support the conclusory statement that the claims are directed to an abstract idea.” App. Br. 14. “Appellants’ disclosure is directed to the problem of the issuance of fraudulent or incorrect green power certificates when green power is saved and consumed at the household level.” App. Br. 14. “Appellants implement [the invention] with a system and method in which measurements are taken at specific points when green power is accumulated and stored, which measurements are then used in calculations to determine whether a certificate can be issued to verify a specific amount of green power.” App. Br. 14–15.

Our Review

In *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014), the Supreme Court applied the framework as set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 US 66 (2012) for determining whether the claims are directed to patent-eligible subject matter. *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of [the judicially-recognized] patent-ineligible

⁴ *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950 (Fed. Cir. 2014).

⁵ *McRo, Inc. v. Namco Bandai Games Am., Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

concepts.” *Id.* If the claims are directed to a patent-ineligible concept, then the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination,’ [to determine whether the additional elements] ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 US 66 at 79, 78). However, the Federal Circuit has articulated that “the first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016). Accordingly, the Federal Circuit determined, if “the claims are directed to a specific implementation of a solution to a problem in the software arts,” then “the claims at issue are not directed to an abstract idea.” *Id.* at 1339. The Federal Circuit also determined claims directed to “limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice” are not directed to an abstract idea. *McRO*, 837 F.3d at 1316.

In the “Background” section, Appellants’ Specification discloses the following:

[T]he green power certificate is to certify the amount of green power that is generated using solar power generation facilities or wind power generation facilities. Because of this, *unless power is consumed by a device that is directly connected to the solar power generation facilities or wind power generation facilities, it is difficult to determine whether or not the power that is consumed by the device is actually green power.* Further, it is difficult to determine whether or not the power that is saved in a battery is green power. Here, although the power is described as an example of green energy, regardless of energy

type, it is difficult to confirm if the energy saved in an energy saving apparatus is green energy or it is difficult to confirm if the energy consumed by the device is green energy.

Spec ¶ 4 (emphasis added).

In the “Detailed Description” section, Appellants’ Specification discloses the following:

If the charged amount information and the saved amount information are input, *the certificate issuance determination unit 125 compares the charged amount with the saved amount on the basis of the input information. If the charged amount coincides with the saved amount within an acceptable error range, the certificate issuance determination unit 125 permits the issuance of a certificate. On the other hand, if the charged amount does not coincide with the saved amount within the acceptable error range, the certificate issuance determination unit 125 does not permit the issuance of the certificate. In the case of permitting the issuance of the certificate, the certificate issuance determination unit 125 notifies the certificate issuance unit 126 of the permission of the issuance of the certificate.*

Spec. ¶ 56 (emphasis added).

We agree with Appellants that the claims are directed to an improved “system and method in which measurements are taken at specific points when green power is accumulated and stored, which measurements are then used in calculations to determine whether a certificate can be issued to verify a specific amount of green power.” App. Br. 14–15. In *McRO*, the court found that a claim reciting a system of automated facial animation through the use of rules, rather than by artists setting weights, to automate tasks that humans perform is directed to patent-eligible subject matter. *McRO*, 837 F.3d at 1313. The court found that the process performed by human animators is not the same as the rules-based process recited in the claimed automation, as the human process is driven by subjective determinations.

McRO, 837 F.3d at 1314. Thus, the court in *McRO* held that it was the incorporation of the specific features of the particular rules as claim limitations that improved the technological process, and by incorporating the specific rules, the claim is limited to a specific process for animation that is not an abstract idea. *McRO*, 837 F.3d at 1315–16. We conclude the claims are analogous to *McRO*.

The claims do not merely recite certification in the abstract; rather, the claims recite a specific technique that “compar[es] a charged amount of green energy charged by the energy charging unit with the charged amount of green energy shown in the measured amount information,” and issues or does not issue a certificate based on the comparison. Claim 1; *see also* Spec. ¶ 56. As such, the claim limitations are directed to improving a technological process by incorporating the specific comparison, and limited to a specific process for certification; these specific claim limitations are not an abstract idea and should not be summarily dismissed. Accordingly, we do not sustain the Examiner’s rejection of independent claim 1.

Independent claims 5, 6, 14, 15, and 16 each also recite the specific technique that compares first and second amounts of energy, and issues or does not issue a certificate based on the comparison. Claims 5, 6, 14, 15, and 16; *see also* Spec. ¶ 56. Accordingly, we also do not sustain the Examiner’s rejection of claims 5, 6, 14, 15, and 16.

Claims 2–4, 7–13, and 17 variously depend from claims 1 and 6. We, therefore, also do not sustain the Examiner’s rejection of claims 2–4, 7–13, and 17.

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ORDER

The Examiner's decision to reject claims 14–16 is reversed.

The Examiner's decision to reject claims 1–13 and 17 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).

AFFIRMED-IN-PART

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOMOYUKI ONO, NARUMI NAGASE, TAKAYASU
KON, and KEI YAMASHITA

Appeal 2017-004595
Application 13/405,949
Technology Center 2800

Before JEREMY J. CURCURI, JUSTIN BUSCH, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

BUSCH, *Administrative Patent Judge*, dissenting-in-part.

I write separately because I agree with the majority's affirmance of the rejections under 35 U.S.C. § 112 and the result reached with respect to claims 1–13 and 17. I respectfully disagree, however, with the majority's reversal of the Examiner's rejection of claims 1–17 under 35 U.S.C. § 101 because I would determine that Appellants' claims are directed to an abstract idea.

THE 35 U.S.C. § 101 REJECTION

Instead of using a definition of 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.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citing *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)); *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334

(Fed. Cir. 2016) (finding “both [the Federal Circuit] and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.”). “Whether a patent claim is drawn to patent-eligible subject matter is an issue of law that we review de novo.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010).

STEP ONE OF ALICE FRAMEWORK

In step one of the *Alice* analysis, we “determine whether the claims at issue are directed to” a patent-ineligible concept, such as an abstract idea. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). The Examiner determines the claims are directed to the concept of “issuing and handling certificates,” which includes the underlying recited steps of acquiring a charged amount of energy measured by an energy saving apparatus, comparing a charged amount from a charging unit with the acquired charged amount, and issuing (or not) a certificate based on the comparison. Final Act. 43; Ans. 3–4 (comparing Appellants’ claims to those in various Federal Circuit cases, including *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950 (Fed. Cir. 2014)).

Appellants argue the claims are not directed to an abstract idea.⁶ See Appeal Br. 13–15; Reply Br. 2–4. Specifically, Appellants argue the Examiner has not established a prima facie case of ineligibility or provided any reason supporting the conclusion of ineligibility. Appeal Br. 13–14; Reply Br. 2–3. Appellants argue the Examiner overgeneralized Appellants’ claims, did not consider Appellants’ claims as a whole, and failed to consider Appellants’ disclosed advantage of allowing “green energy to be mixed with non-green energy in a way that surplus green energy can be sold to a power company.” Appeal Br. 14–15; Reply Br. 3–4 (citing

⁶ Appellants argue the claims as a group with respect to step one of the *Alice* analysis. See Appeal Br. 13–15; Reply Br. 2–4.

McRO, Inc. v. Bandai Namco Games Am. Inc., 837 F.3d 1299 (Fed. Cir. 2016)), 6–7. Appellants assert the Examiner evaluated the comparing step in isolation and merely concluded Appellants’ claims were similar to claims in certain cited Federal Circuit cases, but the Examiner did not explain how Appellants’ claims as a whole, or even the identified portion, are similar to those claims. Reply Br. 3, 7.

While I do not necessarily disagree with the Examiner’s conclusion that the focus of Appellants’ claim is similar to the focus of the claims in *SmartGene*, I note there are different ways to characterize claims for the purpose of determining whether the claims are directed to an abstract idea. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240–41 (Fed. Cir. 2016) (noting that an abstract idea can generally be described at different levels of abstraction).

I agree with the Examiner’s conclusion that the claims are directed to an abstract idea, because claim 1 focuses on obtaining data (a “measured amount information”), comparing two values (the measured amount information and “a charged amount”), in response to the comparison, causing (or not) information (“a certificate”) regarding the comparison to be reported (“issued”), and, upon certain other conditions, discarding the information (“certificate”). The claims merely recite a comparison of two data values associated with two different measured energy amounts, determining whether the comparison triggers issuing a certificate, thereby (possibly) causing information from the comparison to be issued and stored, and discarding the information when the stored energy is output. Notably, Appellants’ claims do not recite a particular method or set of steps for obtaining the data or a particular improvement in the way computers operate.

The Federal Circuit has concluded similar concepts were directed to abstract ideas. Specifically, in *Electric Power*, the Federal Circuit concluded claims reciting a method of collecting data from various sources, “detecting and analyzing events”

by identifying information in the received data, reporting the event analysis results and visualizations of measurements, aggregating the event analysis information, and providing a composite indicator were directed to an abstract idea because the claims were directed to “collecting information, analyzing it, and displaying certain results of the collection and analysis.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351–53 (Fed. Cir. 2016). Similarly, as discussed above, Appellants’ claims recite a method of obtaining data from two sources (the energy charging apparatus and, ultimately, the energy saving apparatus), detecting an event (i.e., do the two amounts coincide), based on the comparison, potentially issuing a certificate, which is similar to displaying the results or storing data, and, optionally, discarding the certificate upon detection of another event (consumption of the energy).⁷

Similarly, the Federal Circuit concluded claims directed to collecting and analyzing information and presenting the results were ineligible as claiming no more than an abstract idea. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014); *see also Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372 (Fed. Cir. 2017) (concluding “claims directed to the collection, storage, and recognition of data are directed to an abstract idea”); *SAP Am., Inc. v. InvestPIC, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (“merely presenting the results of abstract processes of collecting and analyzing information . . . is abstract as an ancillary part of such collection and analysis”) (quotations omitted). Again, similar to the claims in these Federal Circuit cases, Appellants’ claims are directed to obtaining two values,

⁷ Appellants stated that the certificate could be a physical or electronic (digital) certificate. Transcript of Oral Hearing (“Tr.”) 9:20–22 (“I think it could be a digital or a physical certificate, but it could be a data certificate”), 12:8–13.

comparing the values, then presenting or storing a certificate that indicates the results of the comparison, and, optionally, discarding the certificate.

Moreover, limiting the particular data analyzed does not change the character of the claim. *See Elec. Power*, 830 F.3d at 1353 (stating that “collecting information, including when limited to particular content (which does not change its character as information)” is treated as “within the realm of abstract ideas”). Thus, the content of the values compared and the fact that the two values are associated with energy measurements at two different locations does not change the character of the claims.

In *Enfish*, our reviewing court held claims directed to a self-referential logical model for a computer database patent-eligible under step one of *Alice*. *Enfish*, 822 F.3d at 1330. The disclosed technique enabled faster searching and more effective storage of data than previous methods. *Enfish*, 822 F.3d at 1333. The court found the claims directed to “a specific improvement to the way computers operate, embodied in the self-referential table” (*id.* at 1336), and explained that the claims are “not simply directed to *any* form of storing tabular data, but instead are specifically directed to a *self-referential table* for a computer database” that functions differently than conventional databases. *Enfish*, 822 F.3d at 1337. Unlike the claims in *Enfish*, Appellants’ claims are not directed to an improvement to the way computers operate, but instead use computers as tools to measure, obtain, compare, and store data. Appellants do not assert, nor do I see anything in, the claims that recites an improvement to how data is stored, measured, obtained, or compared. Rather, the alleged improvement lies in the decision to compare charged amounts at two locations and issue a certificate only if the two values coincide.

In *McRO*, the Federal Circuit concluded the claims were not abstract because they recited a “specific . . . improvement in computer animation” using “unconventional rules that relate[d] sub-sequences of phonemes, timings, and morph weight sets.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1302–03, 1307–08, 1314–15 (Fed. Cir. 2016). In *McRO*, “the incorporation of the claimed rules, not the use of the computer,” improved an existing technological process. *McRO*, 837 F.3d at 1314. More specifically, the Federal Circuit identified the improvement in *McRO* as producing computer-generated animations similar to the animations generated by a subjective human process, but using the particularly recited rules that were different than the process humans used previously to generate the animations. *McRO*, 837 F.3d at 1314–15 (“This is unlike *Flook*, *Bilski*, and *Alice*, where the claimed computer-automated process and the prior method were carried out in the same way.”). At the level of detail recited in Appellant’s claims, the process of comparing two values measured at two different locations and outputting a result based on the comparison merely automates performance of a human process in the same way.

Finally, Appellants argue the “disclosure advantageously allows green energy to be mixed with non-green energy in a way that surplus green energy can be sold to a power company” and Appellants’ claims are more properly characterized as “‘preventing forgery of green energy certificates’ or ‘allowing green energy to be sold even if it is mixed with non-green energy’.” Appeal Br. 14. Appellants argue this concept is implemented by taking measurements “at specific points when green power is accumulated and stored,” and using those measurements to determine whether to issue a certificate. Appeal Br. 14.

I do not find Appellants’ argument persuasive because, regardless of how Appellants intend the information to be used, the claims merely recite comparing

two values and issuing a certificate. Thus, the character of what Appellants' claims *recite* is merely data manipulation, as discussed above.

I would determine that Appellants' claims are directed to an abstract idea because they are more similar to the claims in *Electric Power*, *Content Extraction*, *SAP*, and *SmartGene* than the claims in *Enfish* and *McRO*.

STEP TWO OF ALICE FRAMEWORK

In step two of the *Alice* analysis, we determine whether the *additional* limitations, when considered both “individually and ‘as an ordered combination’” contain an “inventive concept” sufficient to transform the claimed “abstract idea” into a patent-eligible application. *Alice*, 134 S. Ct. at 2355–58. The Examiner concludes the additional claim elements do not add significantly more than the abstract idea because the various components are generically recited and perform data gathering and output functions. Final Act. 44–46. The Examiner determines that the various components are recited “at a high level of generality” and perform generic functions routinely used in energy charging, storing, and consuming devices. Ans. 5–6, 8–10. The Examiner further finds: the data comparison and certificate issuance steps are part of the abstract idea; the additional functional steps (charging and acquiring in claim 1; receiving, inputting, energy, and saving energy in claim 5; and gathering and outputting in claim 6) are insignificant data gathering steps; and the claims do not recite particular measuring steps or devices. Ans. 6, 8–10 (citing *Elec. Power Grp.*, 830 F.3d 1350).

First, as discussed above, Appellants' claims are directed to an abstract idea that includes obtaining information, comparing information, issuing (or not) a certificate, and, optionally, discarding the certificate. Thus, the additional elements in claim 1 are the particular units (i.e., “energy charging unit,” “measured amount information acquisition unit,” “energy saving apparatus,” and “certificate issuance

unit”) and charging green energy in the energy saving apparatus. Similarly, the additional elements in claim 5 are: “energy input unit,” “energy output unit,” “energy saving unit,” “certificate request unit,” “certificate issuance unit,” “certificate acquisition unit,” “certificate preservation unit,” and “certificate discard unit.” Claim 6’s additional elements are: “measurement unit,” “certificate acquisition unit,” and “certificate issuance unit.” Appellants do not claim any of these individual components provide significantly more, and I agree with the Examiner’s conclusions that these are all generic components recited at a high level of generality, which may be implemented in software. Moreover, even the energy charging unit and apparatus, the energy saving apparatus, the energy consuming apparatus, and the energy input/output units merely perform generic functions implied by their name, and Appellants do not argue these components are anything other than well-understood, routine, and conventional energy apparatuses.⁸

Appellants argue the claims recite using specific apparatuses (energy charging apparatus in claim 1; energy saving apparatus in claim 5; and energy consuming apparatus in claim 6) in specific ways (taking specific measurements and, with respect to claim 6, issuing a certificate with a residual amount of energy), then compare the measured energy to another specific measurement at a different apparatus. Appeal Br. 16–17, 19; Reply Br. 5–6. Appellant argues these specific functions solve a problem because they “can be used to prevent the issuance of a fraudulent or incorrect green power certificate.” Appeal Br. 16–19 (citing Spec. ¶ 171); Reply Br. 5–6. Appellants argue claims 1 and 5 discard certificates, which

⁸ Appellants acknowledge that it is not any of the individual elements that provide an inventive concept, but assert it is the particular combination of elements and steps that provide the inventive concept. Tr. 12:21–13:17.

“does not allow the household to keep the green energy certificate certifying a surplus of green energy if the green energy is consumed at the household level.” Appeal Br. 16–17; Reply Br. 6. Appellants argue claim 6’s issuance of certificates for residual energy amounts provides an additional advantage of tracking and updating certificates based on power consumed. Appeal Br. 19; Reply Br. 6. Appellants also argue their claims differ from those in *Electric Power* because, here, “energy is stored or transferred, measurements are taken, and a specific algorithm is performed using the measurements, for the purpose of creating an article of value (certificate),” whereas the *Electric Power* claims just collected, analyzed, and displayed information without creating “an article (e.g., certificate) that had monetary value in the field of use.” Reply Br. 9.

An inventive concept “cannot be furnished by the unpatentable law of nature (or natural phenomenon or abstract idea) itself.” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016); *see also Alice*, 134 S. Ct. at 2355 (explaining that, after determining a claim is directed to a judicial exception, “we then ask, ‘[w]hat else is there in the claims before us?’” (emphasis added, brackets in original) (quoting *Mayo*, 566 U.S. at 78)). Instead, an “inventive concept” is furnished by an element or combination of elements that is recited in the claim *in addition to* the judicial exception and sufficient to ensure the claim as a whole amounts to significantly more than the judicial exception itself. *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 72–73); *see BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (explaining that the Supreme Court in *Alice* “only assessed whether the claim limitations *other than the invention’s use of the ineligible concept* to which it was directed were well-understood, routine and conventional,” (emphasis added)).

On the other hand, “[i]f a claim’s only ‘inventive concept’ is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea.” *BSG Tech*, 899 F.3d at 1290–91 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370 (Fed. Cir. 2018)). “[I]t is irrelevant whether [the claimed abstract idea] may have been non-routine or unconventional as a factual matter . . . narrowing or reformulating an abstract idea does not add ‘significantly more’ to it.” *BSG Tech*, 899 F.3d at 1291.

Even though Appellants argue claims 1, 5, and 6 separately with respect to the inventive concept, the arguments all essentially focus on this alleged improvement to preventing green energy certificate fraud. To the extent Appellants argue the actual steps themselves of obtaining and comparing the data, issuing certificates, or discarding the certificates provide an inventive concept, I disagree. The claims are directed to the abstract idea of obtaining and comparing information, then issuing (or not) and discarding (or not) certificates. Thus, the steps of obtaining data, comparing data, issuing certificates, and discarding certificates are not *additional* elements that would add significantly more to the abstract idea, regardless of the advantage they may provide.

I also disagree with Appellants’ argument that the mere inclusion of physical components such as the energy charging apparatus or the generation of an item of value (i.e., the certificate) are sufficient to provide an inventive concept for four reasons. First, the transfer, storage, and consumption of energy are extra-solution activity necessary to be able to obtain and compare the particular data and, thus, perform the abstract idea to which the claims are directed. Second, Appellants do not contend the particular energy transfer, storage, and consumption functions or components are anything other than well-understood, routine, and conventional

components. Third, the certificate issuance is part of the abstract idea and, thus, cannot provide an inventive concept. Fourth, merely reciting generic components that perform their generic, well-understood, routine, and conventional functions, or limiting an abstract idea to a particular technological environment is insufficient to provide an inventive concept. *See, e.g., In re LI Commc 'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (determining that reciting certain physical components that limit the environment in which to carry out the abstract idea is insufficient to transform the abstract idea into eligible subject matter); *Cf. Content Extraction*, 776 F.3d at 1348 (“limit[ing] the abstract idea of recognizing and storing information from hard copy documents using a scanner and a computer to a particular technological environment . . . has been held insufficient to save a claim” under § 101).

It is true that a particular arrangement of generic computer components may provide an inventive concept. *BASCOM*, 823 F.3d at 1350 (determining the particular, unconventional placement of a filter at an Internet Service Provider (ISP) server provided a technological improvement and, therefore, an inventive concept). However, unlike the claims in *BASCOM*, I see nothing in the particular arrangement of components in Appellants’ claims that would provide such an inventive concept. Nor do Appellants identify any particular unconventional arrangement of the generically recited conventional components that is comparable to *BASCOM*’s unconventional placement of a filter at an ISP server.

SUMMARY

For the above reasons, I would conclude Appellants’ claims are ineligible under 35 U.S.C. § 101 as being directed to judicially excepted subject matter. Therefore, I would affirm the Examiner’s rejection of claims 1–17 under 35 U.S.C. § 101.