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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* EDWARD F. CRAWLEY, CY HOADLEY KILBOURN, ZIV  
ROZENBLUM, AMOS BENNINGA, NICK SISLER,  
and BLAKE BISSON

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Appeal 2017-006372  
Application 13/678,456<sup>1</sup>  
Technology Center 3600

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Before ELENI MANTIS MERCADER, JOHNNY A. KUMAR and  
JENNIFER S. BISK, *Administrative Patent Judges*.

BISK, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>2</sup>

Appellants, listed above, seek our review under 35 U.S.C. § 134(a) of the Examiner's rejection of claims 1–21. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

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<sup>1</sup> Appellants identify the real party in interest as Ekotrope. App. Br. 1.

<sup>2</sup> Throughout this Decision we have considered the Specification filed November 15, 2012 (“Spec.”), the Final Rejection mailed September 3, 2015 (“Final Act.”), the Appeal Brief filed October 3, 2016 (“App. Br.”), the Examiner's Answer mailed January 10, 2017 (“Ans.”), and the Reply Brief filed March 10, 2017 (“Reply Br.”).

## STATEMENT OF THE CASE

Appellants' invention relates to determining building components. Spec. 1:13–14. For example, identifying the best building materials for energy efficient buildings. *Id.* at 2:1–13.

Claim 1 is illustrative:

1. A green building design determining system, comprising:  
a computer-implemented green building unit;  
one or more client computing devices, each client computing device having a processor and memory and being capable of connecting to the green building unit over a link; and  
the green building unit having a decision engine that receives a set of building related inputs for a building project for each client, determines all designs that meet the set of building related inputs and generates a display with all of the designs for the building project for the client that comply with a utility function associated with the particular building project, wherein the utility function generates a score based on a desire of the client, a financial goal of the client, environmental awareness of the client and code requirements of the client.

## THE REJECTIONS

1. The Examiner rejected claims 1–21 under 35 U.S.C. § 101 as directed to ineligible subject matter. Final Act. 15–16.
2. The Examiner rejected claims 1–21 under 35 U.S.C. § 103(a) as being unpatentable over Kennedy (US 2004/0239494 A1, published Dec. 2, 2004) and Teller (US 2012/0323535 A1, published Dec. 20, 2012). Final Act. 16–25.

ANALYSIS  
THE § 101 REJECTION

We have reviewed the Examiner’s rejection in light of Appellants’ contentions and the evidence of record. For the following reasons, we sustain the Examiner’s rejection.

For purposes of the § 101 rejection, Appellants argue all the claims as a group. *See* App. Br. 4–12. We select claim 1 as representative. Claims 2–21 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

*Legal Framework*

To determine whether claims are patent eligible under § 101, we apply the Supreme Court’s two-step test articulated in *Alice Corp. Proprietary Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). First, we determine whether the claims are directed to a patent-ineligible concept: laws of nature, natural phenomena, and abstract ideas. *Id.* at 2354–55. If so, we then proceed to the second step and examine the claim’s elements—both individually and as an ordered combination—to determine whether the claim contains an “inventive concept” sufficient to transform the claimed abstract idea into a patent-eligible application. *Id.* at 2357.

The Federal Circuit has described the *Alice* step-one inquiry as looking at the “focus” of the claims, their “character as a whole,” and the *Alice* step-two inquiry as looking more precisely at what the claim elements add—whether they identify an “inventive concept” in the application of the ineligible matter to which the claim is directed. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016); *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

*Alice Step One*

The Examiner concludes that the claimed invention is directed to “the abstract ideas of fundamental economic activities and mathematical relationships/formulas, namely analyzing costs of alternative building designs based on a function.” Final Act. 15. The Examiner compares the claims to those at issue in *Electric Power*, stating that the claims “analyz[e] costs of alternative building designs based on a function.” Ans. 5 (citing *Electric Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)).

Appellants contend that “the claims at issue are directed to a green building design determining system and method which is clearly not a fundamental economic principle (financial risk hedging) that existed for hundreds of years before the claims.” App. Br. 10. According to Appellants, “the present claims are directed to improving an existing technological process (green building design)” similar to the claims found patent-eligible in *McRO*. *Id.* at 10–11 (citing *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)). Appellants also contend that the “present claims are limited to a specific process” and do not pre-empt a general idea. *Id.* at 11; Reply Br. 1–2.

We agree with the Examiner that claims 1–21 are all directed to an abstract idea—analyzing alternative green building designs using a utility function, where the utility function is a mathematical determination. Spec. 9:1–7 (“The utility function can be one goad, a set of weighted goals that include cost, desired payback, environmental goals, convenience etc. (For example, a utility function can be defined as a sum of 20% upfront cost reduction, 30% payback period reduction, 50% CO2 emission reduction) . . .

.”); *see also* App. Br. 11 (“[T]he present claims are directed broadly to building design that may be an abstract idea like the content filtering in *Bascom*.”). Our reviewing court has found similar methods to be abstract ideas. In particular, we find the claims similar to those found to be directed to an abstract idea in *Electric Power*, which did “not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology.” *Elec. Power*, 830 F.3d at 1351. “[W]e have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas.” *Elec. Power*, 830 F.3d at 1353 (citations omitted); *see also Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC.*, 874 F.3d 1329, 1337–38 (Fed. Cir. 2017) (concluding claims directed to the functional results of accumulating, converting, and monitoring records manipulate data “but fail[] to do so in a non-abstract way”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1345, 1347 (Fed. Cir. 2014) (concluding the “claims generally recite . . . extracting data . . . [and] recognizing specific information from the extracted data” and that the “claims are drawn to the basic concept of data recognition”).

Similar to the claims at issue in *Electric Power*, the claimed invention here gathers, manipulates, and analyzes information of a specified content, but does not use any particular inventive technology for performing those functions. That the information pertains to green building designs is of no consequence here, for collecting and analyzing such information does not

make the collection and analysis non-abstract. *See SAP America, Inc. v. Investpic, LLC*, 890 F.3d 1016, 1021 (Fed. Cir. 2018), *modified on reh'g* (Fed. Cir. Aug. 2, 2018). Moreover, we are not persuaded that by reciting a “decision engine” that uses a “utility function,” Appellants have distinguished their claims from those of *Electric Power*. *See* Reply Br. 1 (arguing that the claimed utility function “is the technical means to perform the function of ‘collecting information, analyzing it and displaying certain results’ so that the *Electric Power Group* case is not persuasive”).

Nor are we persuaded that the claimed invention improves the processor’s functionality or efficiency, or otherwise changes the way that device functions, at least in the sense contemplated by the Federal Circuit in *Enfish, LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellants’ arguments to the contrary (App. Br. 26–27). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339.

Nor do we find Appellants’ reliance on *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (App. Br. 26–27, 29–30) persuasive. There, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO*, 837 F.3d at 1315. Notably, the recited process *automatically animated characters* using particular information and techniques—an improvement over manual three-dimensional animation techniques that were not directed to an abstract idea. *Id.* at 1316.

But unlike *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here analyzes information to determine the desirability of a design based on certain goals—a determination that is not only directed to a fundamental economic practice, but also does not improve a display mechanism as was the case in *McRO*. Although the claimed invention requires computer components, it is the incorporation of those components—not a claimed rule—that purportedly improves the existing process. *Cf. FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016).

In short, the claimed invention does not solve a *technical* problem, but rather solves a *business* problem, namely analyzing green building designs. Ans. 5–8. The Examiner’s point in this regard is well taken. Although the claimed invention may be beneficial as Appellants contend, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379–80 (Fed. Cir. 2015).

We, therefore, agree with the Examiner that the claims are directed to an abstract idea.

#### *Alice Step Two*

Because the claims are directed to an abstract idea, we proceed to step two to determine whether the claims include additional limitations that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 134 S. Ct. at 2357. For example, we look at whether the claims focus on a specific means or method that improves the relevant technology or instead are directed to a result or

effect that, itself, is the abstract idea and merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

The Examiner concludes the claimed elements, either individually or as an ordered combination, do not add significantly more to the abstract idea such that the claimed invention is rendered patent-eligible. Final

Act. 15–16; Ans. 8–10. The Examiner adds that the decision engine adds

no more than mere instructions to apply or implement the abstract idea using a generic computer and generic computer functions and appending to the recited abstract idea a recitation of well-understood routine and conventional activities previously known to the industry, which is not sufficient to transform an abstract idea into a patent eligible invention.

Ans. 9 (citing Spec 4:7–16).

Appellants argue the claims recite additional elements that amount to significantly more than the identified abstract idea. App. Br. 11–12.

According to Appellants, the claims are like those found patent-eligible in *Bascom* in that they “are a technical improvement over the prior art ways of green building design.” App. Br. 11.

We agree with the Examiner that the claims recited additional elements that are no more than instructions to apply the abstract idea using generic hardware and software. *See* Ans. 7–10. Unlike the claims found patent-eligible in *Enfish*, the focus of the claims here is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools. *Enfish*, 822 F.3d at 1335–36.

Moreover, the analysis of *Alice*’s step two is not an evaluation of novelty or nonobviousness, but rather, a search for “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.” *Alice*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Lab.*, 132 S. Ct. 1289, 1294 (2012)). The question in the second step is not whether the claimed invention is novel, but rather whether the implementation of the abstract idea involves “more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content*, 776 F.3d at 1347–48 (quoting *Alice*, 134 S. Ct. at 2359).

Consequently, even if we were to agree with Appellants that the claim recites a particularly novel and useful method for green building design, the Examiner determines, and Appellants do not persuasively refute, that the computer implementation of the claimed methodology requires only computer equipment and functions that are well-understood, routine, and conventional, such as storing, receiving, processing, and displaying data. Final Act. 3–6; Ans. 7–10; *see, e.g., Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (“Rather, the claims recite both a generic computer element—a processor—and a series of generic computer ‘components’ that merely restate their individual functions—i.e., organizing, mapping, identifying, defining, detecting, and modifying.”); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2357) (“Instead, the claimed sequence of steps comprises only ‘conventional steps, specified at a high level of generality,’ which is insufficient to supply an ‘inventive concept.’”); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1352, 1355 (Fed. Cir. 2014) (finding computer-implemented system for guaranteeing performance of an online transaction to be ineligible).

That the Specification indicates that standard off-the-shelf computer technology is usable to implement the claimed invention only bolsters the notion that the claimed invention does not focus on an improvement in computers as tools, but rather certain independently abstract ideas that use computers as tools. Spec. 4:1–27, *see Elec. Power*, 830 F.3d at 1354.

We do not find Appellants’ reliance on *Bascom* persuasive. Reply Br. 7 (citing *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)). In *BASCOM*, the claims were generally directed to filtering content. 827 F.3d at 1348. Although the court determined the claims recited generic computer, network, and Internet components that were not inventive by themselves, the court found the ordered combination of the limitations provided the requisite inventive concept. *Id.* at 1349–1350 (“[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces”). There, the patent extensively claimed and explained how a particular arrangement of elements was “a technical improvement over prior art ways of filtering such content.” *Id.* at 1350 (“According to *BASCOM*, the inventive concept harnesses this technical feature of network technology in a filtering system by associating individual accounts with their own filtering scheme and elements while locating the filtering system on an ISP server.”). Here, other than providing general conclusory statements, Appellants do not persuasively explain how the claims are similar to those in *BASCOM*.

Lastly, we find unavailing Appellants’ contention that the claims are patentable because they do not pre-empt a general idea. App. Br. 11. Where, as here, the claims cover a patent-ineligible concept, preemption

concerns “are fully addressed and made moot” by an analysis under the *Alice* framework. *See Ariosa*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). The Examiner’s point in this regard is well taken. *See* Ans. 13.

For the foregoing reasons, then, the recited elements—considered both individually and as an ordered combination—do not contain an “inventive concept” sufficient to transform the claimed abstract idea into a patent-eligible application.

### *Conclusion*

Therefore, we are not persuaded that the Examiner erred in rejecting claims 1–21 under § 101.

### THE § 103 REJECTION

The Examiner rejects claims 1–21 as obvious over the combination of Kennedy and Teller. Final Act. 16–25; Ans. 11–17. Appellants direct their arguments to the limitations of independent claims 1 and 14. *See* App. Br. 20–22; Reply Br. 2–5. Claims 2–13 and 15–21 stand or fall with claims 1 and 14. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claims 1 and 14 recite receiving a set of user parameters for a client, which include “a desire of the client, a financial goal of the client, environmental awareness of the client and code requirements of the client” (the “receiving parameters” limitation). The Examiner relies on Kennedy for receiving parameters, including energy efficiency, cost savings, project cost, for a building design using a GUI. Final Act. 17 (citing Kennedy ¶¶ 20–26, 71), 22 (citing Kennedy ¶¶ 30, 67–70, Fig. 6); Ans. 11 (citing Kennedy Fig. 6, ¶ 67), 13. Because Kennedy does not explicitly disclose “wherein the utility function generates a score based on a desire of the client,

a financial goal of the client, environmental awareness of the client,” the Examiner relies on Teller’s disclosure of various parties, including architects, developers, and property tenants collaborating to enter design details. Final Act. 18 (citing Teller Figs. 2, 7, ¶¶ 44, 56, 60), 23; Ans. 14–15 (citing Teller ¶¶ 30, 43–44, 48–49, 65). The Examiner explains that “one of ordinary skill in the art understands that developers are clients are architects.” Ans. 14; *see also* Ans. 15 (“Examiner interprets ‘the client’ recited in the claims of the present invention includes ‘the developer’ of a structure discussed in Teller.”).

Appellants argue that the cited references do not teach the receiving parameters limitation because “Kennedy only discloses that optimization occurs on a single model using a parameter” and “the parameters used to generate the quality or fitness function (alleged to be akin to the claimed utility function score) in Teller are static” and not different for each client. App. Br. 12–15 (citing Kennedy ¶¶ 21, 22, 25, 30; Teller ¶¶ 56, 59; Reply Br. 2–5).<sup>3</sup>

Appellants’ arguments do not persuade us of Examiner error because they attack the references individually, while the Examiner relies on the combined disclosures in the references to reject the independent claims. *See* Final Act. 16–18, 22–24. Where a rejection rests on the combined disclosures in the references, an appellant cannot establish nonobviousness by attacking the references individually. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Here, the combined disclosures in Kennedy

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<sup>3</sup> We note that Appellants’ arguments regarding the § 103 rejection in the Reply Brief appear to be exactly the same as those in the Appeal Brief. *Compare* App. Br. 12–15; Reply Br. 2–5.

and Teller teach the disputed receiving parameters limitation. *See* Final Act. 16–18, 22–24; Ans. 11–17.

Moreover, we agree with the Examiner (Ans. 12–13) that Kennedy is not restricted to optimizing based on a single parameter. For example, Kennedy states that “model *parameters* can be adjusted prior to performing an energy analysis (or ‘simulation run’) of one or more buildings” and “[e]ach parameter can be held constant or restricted to a range of possible values.” Kennedy ¶ 67 (emphasis added). In addition, Kennedy discusses running multiple simulations “to exhaust all *combinations of parameters* and/or to optimize a given *set of building features*” and ranking results according to “*criteria* such as energy efficiency, cost savings, project cost, and/or other suitable factors.” *Id.* ¶ 70 (emphases added).

We also agree with the Examiner (Ans. 14–16) that Teller is not restricted to static parameters that are not variable for different users. Teller states that “[s]ystem 50 may provide each user with a customizable attributes quantification interface” and “[i]n general, attributes of a structure will be the same across users . . . [t]he ability to change attributes would be a matter of permission within the system.” Teller ¶¶ 55, 59. We agree with the Examiner that “even though the attributes may be the same across all users of the system for a particular structure, the attributes may also be different for each user and need not be the same for each developer (i.e. client) across different structures.” Ans. 16.

For these reasons, we are not persuaded of any error in the Examiner’s rejection of independent claims 1 and 14. Appellants do not argue claims 2–13 and 15–21 separately with particularity. App. Br. 13, 15; Reply Br. 3, 5. Thus, for the same reasons as discussed with respect to independent claims 1

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and 14, Appellants' arguments are not persuasive of any error in the Examiner's determination.

DECISION

We affirm the Examiner's decision to reject claims 1–21.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED