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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DEBORAH LIU, NIPUN MATHUR,  
JEFFREY ANDREW KANTER, and VIJAYE RAJI

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Appeal 2017-004546  
Application 13/749,557<sup>1</sup>  
Technology Center 3600

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Before JUSTIN BUSCH, JASON J. CHUNG, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1, 4–8, and 11–14.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention is directed to providing suggested content items to users in a social networking system. Spec. ¶ 1. Claim 1 is illustrative of the invention and is reproduced below:

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<sup>1</sup> According to Appellants, the real party in interest is Facebook, Inc. App. Br. 1.

<sup>2</sup> Claims 2, 3, 9, and 10 have been cancelled. App. Br. 20–21.

1. A method comprising:
  - identifying a user of a social networking system;
  - maintaining a plurality of data stores including a content data store comprising a plurality of objects and an edge data store comprising plurality of connections therebetween;
  - receiving a plurality of recommendation units for the user, each recommendation unit including a link to a recommendation that suggests the user perform an action in the social networking system on an object in the content data store identified by the recommendation unit, the action performed by the user, responsive to the user accessing the link, being stored in the edge data store by the social networking system;
  - retrieving, from the edge data store, information describing one or more connections in the edge data store between the user and the object identified by each of the recommendation units;
  - determining the user's prior interactions with the object identified by each recommendation unit based on the retrieved information describing one or more connections in the edge data store between the user and the object identified by each of the recommendation units;
  - calculating a score for each of the plurality of recommendation units based at least in part on the determined prior interactions of the user with the object identified by each recommendation unit;
  - receiving a bid amount from a content provider associated with a sponsored recommendation unit of the plurality of recommendation units;
  - increasing a score for the sponsored recommendation unit relative to one or more of the other recommendation units based on the bid amount;
  - ranking the plurality of recommendation units based on the scores;
  - selecting one or more recommendation units based at least in part on the ranking; and
  - providing the selected recommendation units for display to the user.

## REJECTIONS

Claims 1, 4–8, and 11–14 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception to patentable subject matter. Final Act. 2–3.<sup>3</sup>

Claims 1, 4–8, and 11–14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Goder (US 2014/0019233 A1; published Jan. 16, 2014). Final Act. 3–10.

We have only considered those arguments that Appellants actually raised in the Briefs. Arguments Appellants could have made, but chose not to make, in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

## ANALYSIS

### **35 U.S.C. § 101: Claims 1, 4–8, and 11–14**

The Examiner concludes the concept of providing offers and recommendation units based on scores and ranking is a fundamental economic practice. Final Act. 2. The Examiner also concludes the claims map to the abstract idea of “targeted marketing.” *Id.* The Examiner concludes “the only other element in the claims . . . is a generic computer structure.” *Id.* at 2–3. The Examiner concludes that the cases most relevant to the contested claims are *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), *Bilski v. Kappos*, 561 U.S. 593 (2010), *buySAFE*,

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<sup>3</sup> We herein refer to the Specification filed Jan. 24, 2013 (“Spec.”); Final Office Action mailed Mar. 11, 2016 (“Final Act.”); Appeal Brief filed Aug. 11, 2016 (“App. Br.”); and the Examiner’s Answer, mailed Nov. 18, 2016 (“Ans.”). It is noted a Reply Brief was filed on Jan. 17, 2017.

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*Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014), *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), *SmartGene, Inc. v Advanced Biological Laboratories*, 555 F. App'x 950 (Fed. Cir. 2014) (non-precedential), *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 F. App'x 988 (Fed. Cir. 2014) (non-precedential), and *Digitech Image Technologies, LLC v Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014). Final Act. 2.

Moreover, the Examiner determines the claims do not recite significantly more than the abstract idea because generic computer components are claimed as performing the basic functions of receiving, generating, and transmitting. *Id.* at 2–3.

Appellants argue the Examiner's conclusion that the present claims are directed to an abstract idea is incorrect because

[t]he process of “receiving a recommendation unit, retrieving information describing a connection, calculating a score, receiving a bid, increasing and ranking a recommendation unit, selecting a recommendation unit, and providing a recommendation unit” cannot be a fundamental economic practice when it encompasses a specific type of content (a recommendation unit), obtaining specific information (information describing a connection), and performing various specific actions (calculating a score, increasing the score), when there are various other ways to distribute content.

App. Br. 7.

Appellants further argue the claims do not recite an abstract idea; but, even if the claims were directed to an abstract idea, the combination of steps amount to significantly more than the abstract idea because

the additional elements add specific limitations other than what is well-understood, routine and conventional in the field . . . and add[] meaningful limitations that amount to more than generally

linking the use of the abstract idea to a particular technological environment.

*Id.* at 11. Moreover, Appellants argue “the pending claims are directed to a ‘business challenge that is particular to the Internet,’” and therefore, “do not ‘merely recite the performance of some business practice known from the pre-Internet world.’” *Id.* at 13.

Following the decision in *Alice Corp.*, (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 82–84 (2012)), we analyze claims where the abstract idea judicial exception to the categories of statutory subject matter is at issue using the following two-part analysis set forth in *Mayo*: 1) determine whether the claim is directed to an abstract idea; and 2) if an abstract idea is present in the claim, determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. *See Alice*, 134 S. Ct. at 2350.

As to the first part of the analysis, examples of abstract ideas referenced in *Alice* include: fundamental economic practices;<sup>4</sup> certain methods of organizing human activities;<sup>5</sup> “[a]n idea of itself”;<sup>6</sup> and, mathematical relationships or formulas.<sup>7</sup> Claims that include abstract ideas

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<sup>4</sup> *Alice Corp.*, 134 S. Ct. at 2350: e.g., intermediated settlement, i.e., the use of a third party intermediary to mitigate settlement risk.

<sup>5</sup> *Id.* at 2356: e.g., a series of steps instructing how to hedge risk (citing *Bilski*, 561 U.S. at 599).

<sup>6</sup> *Id.* at 2355: e.g., a principle, an original cause, a motive (citing *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) and *Le Roy v. Tatham*, 14 How. 156, 175 (1852)).

<sup>7</sup> *Id.* at 2350: e.g., a mathematical formula for computing alarm limits in a catalytic conversion process (*Parker v. Flook*, 437 U.S. 584, 594–95

like these are examined under the second part of the analysis to determine whether the abstract idea has been applied in an eligible manner.

As to the second part of the analysis, we consider the claim as a whole by considering all claim elements, both individually and in combination. *Id.* at 2355. Limitations referenced in *Alice* that may be enough to qualify as “significantly more” when recited in a claim with an abstract idea include, as non-limiting or non-exclusive examples: improvements to another technology or technical field;<sup>8</sup> improvements to the functioning of the computer itself;<sup>9</sup> and meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.<sup>10</sup> Limitations referenced in *Alice* that are not enough to qualify as “significantly more” when recited in a claim with an abstract idea include, as non-limiting or non-exclusive examples: adding the words “apply it” (or an equivalent) with an abstract idea;<sup>11</sup> mere instructions to implement an abstract idea on a computer;<sup>12</sup> or requiring no more than a generic computer

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(1978)), or a formula for converting binary-coded decimal numerals into pure binary form (*Benson*, 409 U.S. at 71–72).

<sup>8</sup> *Id.* at 2358: e.g., a mathematical formula applied in a specific rubber molding process (citing *Diamond v. Diehr*, 450 U.S. 175, 177–78 (1981)).

<sup>9</sup> *Id.* at 2359.

<sup>10</sup> *Id.* at 2360: noting that none of the hardware recited “offers a meaningful limitation beyond generally linking ‘the use of the [method] to a particular technological environment,’ that is, implementation via computers” (citing *Bilski*, 561 U.S. at 610–11).

<sup>11</sup> *Id.* at 2357–58.

<sup>12</sup> *Id.*: e.g., simply implementing a mathematical principle on a physical machine, namely a computer (citing *Mayo*, 566 U.S. at 84–85).

to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.<sup>13</sup>

If there are no meaningful limitations in the claim that transform the abstract idea into a patent eligible application such that the claim amounts to significantly more than the abstract idea itself, the claim is directed to non-statutory subject matter under 35 U.S.C. § 101.

The Federal Circuit held “merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.” *Elec. Power Gp., LLC v. Alstom*, 830 F.3d 1350, 1355 (Fed. Cir. 2016). In addition, “merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.” *Id.* at 1354. The Federal Circuit further stated:

[t]he claims in this case do not even require a new source or type of information, or new techniques for analyzing it. . . . As a result, they do not require an arguably inventive set of components or methods, such as measurement devices or techniques, that would generate new data. They do not invoke any assertedly inventive programming. Merely requiring the selection and manipulation of information—to provide a “humanly comprehensible” amount of information useful for users . . . by itself does not transform the otherwise-abstract processes of information collection and analysis.

*Id.* at 1355 (internal citations omitted).

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<sup>13</sup> *Id.* at 2359: e.g., using a computer to obtain data, adjust account balances, and issue automated instructions.

*Step 2A*

On this record, we see no error in the Examiner’s analysis and conclusion that claims 1, 4–8, and 11–14 are directed to an abstract idea. Ans. 2–3. That is, we agree with the Examiner that the concept of providing offers and recommendation units based on scores and ranking is a fundamental economic practice. *Id.* at 2.

Moreover, we note that *Electric Power* cites to *buySAFE* and *SmartGene* (the Examiner relied on both *buySAFE* and *SmartGene*); therefore, we will analyze the claims using *Electric Power*. *Elec. Power*, 830 F.3d at 1354–1355. Similar to the claims in *Electric Power*, claims 1, 4–8, and 11–14 of the present case are directed to presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular recommendation for presentation), and are abstract as an ancillary part of such collection and analysis. Additionally, like *Electric Power*, claims 1, 4–8, and 11–14 of the present case merely require the selection and manipulation of information to provide a “humanly comprehensible” amount of information useful for users, which by itself does not transform the otherwise-abstract processes of information collection and analysis.

With regards to Appellants’ argument that the claim cannot be directed to an abstract idea because there are claim limitations related to the “recommendation unit” (*see* App. Br. 6–7), Appellants appear to conflate improperly the requirements for determining an abstract idea (step 2A) with determining additional elements that amount to significantly more (step 2B). Nonetheless, we concluded *supra*, the present claims recite an abstract idea for similar reasons articulated by the Federal Circuit in *Electric Power*. And

to the extent Appellants are arguing the claims in the present case amount to significantly more than an abstract idea, the claims here do not require additional elements that amount to significantly more because similar to *Electric Power* “[n]othing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.” *Elec. Power*, 830 F.3d at 1355. Because claims 1, 4–8, and 11–14 are directed to an abstract idea, we proceed to step (2B) of the *Alice*, two-part test.

*Step 2B*

Regarding step (2B) of the *Alice* two-part test, claims 1, 4–8, and 11–14 do not amount to significantly more than an abstract idea.

With regard to Appellants’ argument that the pending claims are patent eligible because the claims recite unconventional features, (*see* App. Br. 10–12), Appellants appear to conflate improperly the requirements for eligible subject matter (§ 101) with the independent requirements of novelty (§ 102) and non-obviousness (§ 103). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond*, 450 U.S. at 188–89; *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (stating that, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility”).

Regarding Appellants' argument that "the pending claims are directed to a 'business challenge that is particular to the Internet,'" and therefore, "do not 'merely recite the performance of some business practice known from the pre-Internet world'" (*see* App. Br. 13), we disagree for the following reasons. Even if claims 1, 4–8, and 11–14 cannot be divorced from technology as Appellants contend (App. Br. 12–14), this does not mean claims 1, 4–8, and 11–14 recite patent eligible subject matter because the Federal Circuit held that claims directed to "selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas." *Elec. Power* at 1355.

Similarly, claims 1, 4–8, and 11–14 of the present case describe the concept of receiving a recommendation, retrieving information describing a connection, calculating a score, receiving a bid, increasing and ranking a recommendation unit, selecting a recommendation unit, and providing a recommendation unit, which is not significantly more than an abstract idea. In addition, the present claims are directed to a targeted marketing computing environment, which is implemented through the generic components described as "social networking system," "edge data store," "content data store," and "providing [. . .] for display." There is neither a modification to the underlying conventional technology, nor is there a new technique claimed. Instead, we agree with the Examiner that Appellants' claims are directed to generic components, claimed at a high level of generality, and lacking in implementation details. Final Act. 3. Claims 1, 4–8, and 11–14, therefore, do not amount to significantly more than an

abstract idea. *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1056 (Fed. Cir. 2017) (generic computer elements did not represent improvement in computer technology but rather were invoked merely as tools, and did not transform the claims into significantly more than claims to abstract idea itself).

Accordingly, for the reasons stated *supra*, we sustain the Examiner’s rejection of: (1) independent claims 1 and 8; and (2) dependent claims 4–7 and 11–14.

**35 U.S.C. § 102(e): Claims 1, 4–8, and 11–14**

The Examiner finds that Goder teaches social networking system 100 converts the score and the expected value into a common unit of measurement, allowing both the recommendation units and the advertisements to be ranked together based on benefit to social networking system 100, which the Examiner maps to “increasing a score for the sponsored recommendation unit relative to one or more of the other recommendation units based on the bid amount” as recited in independent claim 1 (and similarly recited in claim 8). Ans. 4 (citing Goder ¶¶ 8, 24); Final Act. 5, 11 (citing Goder ¶¶ 8, 44, claim 1).

Appellants argue Goder does not disclose “receiving a bid amount associated with a recommendation unit, much less of increasing a score of a recommendation unit for which a bid amount was received **relative** to scores of other recommendation units.” App. Br. 15–16 (emphasis added). Specifically, Appellants argue “Goder explicitly discloses determining a score for a recommendation unit that is unrelated to bid amounts and determining a separate expected value for advertisements that are associated

with bid amounts,” which does not anticipate “increasing a score for the sponsored recommendation unit relative to one or more of the other recommendation units based on the bid amount” as recited in independent claim 1 (and similarly recited in claim 8). *Id.* at 16.

We agree with Appellants’ argument (*see* App. Br. 14–17; Reply Br. 10–14) that the cited portions of Goder relied upon by the Examiner fail to disclose “increasing a score for the sponsored recommendation unit relative to one or more of the other recommendation units based on the bid amount,” as recited in independent claim 1 (and similarly recited in claim 8). The Examiner primarily relies on paragraph 24 of Goder. Ans. 4. Paragraph 24 of Goder discloses social networking system 100 converts the score and the expected value into a common unit of measurement, allowing both the recommendation units and the advertisements to be ranked together based on benefit to social networking system 100. *Id.* (citing Goder ¶ 24). Stated differently, paragraph 24 of Goder does not show how the bid amount causes a recommendation score to *increase*. Goder ¶ 24. We also find the other cited portions of Goder do not remedy the shortcomings of Goder’s paragraph 24. Ans. 4 (citing Goder ¶¶ 8, 24); Final Act. 5, 11 (citing Goder ¶¶ 8, 44, claim 1).

Accordingly, for the reasons stated *supra*, we do not sustain the Examiner’s anticipation rejection of claims 1, 4–8, and 11–14.

#### DECISION

We affirm the Examiner’s decision rejecting claims 1, 4–8, and 11–14 under 35 U.S.C. § 101.

We reverse the Examiner’s decision rejecting claims 1, 4–8, and 11–14 under 35 U.S.C. § 102(e).

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Because we affirm at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision to reject all of the pending claims.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED