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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MARK J. DAVIDSON and CHRISTOPHER T. SCHENKEN

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Appeal 2018-002710  
Application 13/435,831<sup>1</sup>  
Technology Center 3600

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Before JOHN A. EVANS, HUNG H. BUI, and AARON W. MOORE,  
*Administrative Patent Judges.*

BUI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–4, 6, 7, 10–12, and 14–17, which are all the claims pending in the application. Claims 5, 8, 9, and 13 are cancelled. Claims App'x. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.<sup>2</sup>

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<sup>1</sup> According to Appellants, the real party in interest is United Parcel Service of America, Inc. App. Br. 2.

<sup>2</sup> Our Decision refers to Appellants' Appeal Brief ("App. Br.") filed August 3, 2017; Reply Brief ("Reply Br.") filed January 16, 2018; Examiner's Answer ("Ans.") mailed December 12, 2017; Final Office Action ("Final Act.") mailed May 5, 2017; and original Specification ("Spec.") filed March 30, 2012.

## STATEMENT OF THE CASE

Appellants' invention relates to "systems and methods for capturing and evaluating operational data in order to improve operational efficiencies in a variety of business contexts." Spec. 2:10–12. According to Appellants, "an asset management computer system [is provided] for assessing asset efficiency." Spec. 2:14–15. One or more processors are configured to: "[1] receive operational data indicative of one or more asset dynamics for at least one asset during one or more time periods; [2] segment the operational data into a plurality of activity segments, the activity segments representing periods of time classified according to asset activity; and [3] determine, based on the operational data, one or more operational characteristics for each of the activity segments." Spec. 2:18–22.

Claims 1 and 17 are independent. Claim 1 is illustrative of the claimed subject matter, as reproduced below:

1. An asset management computer system for assessing asset efficiency, said asset management computer system comprising:

one or more memory storage areas; and

one or more processors in communication with said one or more memory storage areas;

wherein said one or more processors are, collectively, configured to:

receive operational data from at least one location-determining device associated with at least one asset, wherein said operational data comprises time stamped data records each indicative of asset dynamics for the at least one asset at individual instances in time, wherein the operational data is collectively indicative of one or more asset dynamics for the at least one asset during one or more time periods, wherein said one

or more asset dynamics comprise the location of said at least one asset;

segment said operational data into a plurality of activity segments each having an activity classification, said activity segments representing periods of time classified according to asset activity, and wherein each activity segment comprises a chronological series of time stamped data records collectively indicating that the asset is engaged in a consistent asset activity;

determine, based at least in part on said operational data, planned locations for each of said activity segments;

compile, based at least in part on said operational data, one or more operational characteristics for each of said activity segments, wherein said operational characteristics comprise the location of the at least one asset during a respective activity segment;

determine, based at least in part on the activity classification for each of said activity segments, abnormality criteria for each of said activity segments, wherein the abnormality criteria for each of said activity segments comprises a threshold distance from the planned location determined based at least in part on the activity classification for the at least one asset during the activity segment;

compare the location of the at least one asset during at least one activity segment against the planned location for the at least one asset during the at least one activity segment;

determine whether the location of the at least one asset during the at least one activity segment is within the threshold distance from the planned location for the at least one asset during the at least one activity segment;

identify one or more of said activity segments indicating a potentially inefficient asset activity based on the location of said at least one asset during respective activity segments and the activity classification of the respective activity segments, wherein each activity segment indicating a potentially inefficient asset activity is identified as occurring outside of the threshold distance for the respective activity segment; and

generate, via a graphical display, a graphical representation comprising a Gantt chart of one or more of said activity segments.

App. Br. 12 (Claims App'x).

### EXAMINER'S REJECTION<sup>3</sup>

Claims 1–4, 6, 7, 10–12, and 14–17 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an abstract idea without significantly more. Final Act. 6–11.

### DISCUSSION

To determine whether subject matter is patent-eligible under § 101, the Supreme Court has set forth a two part test “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” such as an abstract idea. *Id.* If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016).

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<sup>3</sup> Claims 1–4, 6, 7, 10–12, and 14–17 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Bird et al. (US 6,526,341 B1; issued Feb. 25, 2003) (“Bird”), Sutherland (US 5,068,656; issued Nov. 26, 1991), and Sheha et al. (US 7,903,001 B2; issued Mar. 8, 2011) (“Sheha”). However, the Examiner withdrew the § 103 rejection in the Examiner's Answer (Ans. 3). As such, we need not address this rejection on appeal.

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “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.” *Alice*, 134 S. Ct. at 2355 (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.* (quoting *Mayo*, 566 U.S. at 72–73). “[W]ell-understood, routine, [and] conventional activit[ies]’ previously known to the industry” are insufficient to transform an abstract idea into patent-eligible subject matter. *Id.* (quoting *Mayo*, 566 U.S. at 73).

In rejecting claims 1–4, 6, 7, 10–12, and 14–17 under 35 U.S.C. § 101, the Examiner determines these claims are directed to an abstract idea of “assessing asset efficiency” and include limitations that are analogous to claims directed to organizing, storing, and transmitting information discussed in *Cyberfone*. Final Act. 6–7 (quoting *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App’x 988 (Fed. Cir. 2014)). The Examiner also determines steps recited in these claims can be implemented mentally or performed manually by a human with pen and paper. Final Act. 7–8; *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011).

The Examiner further determines the claims fail to amount to “significantly more” than the judicial exception” because these claims do not include (1) “improvements to another technology or technological field,” (2) “improvements to the functioning of the computer itself,” (3) “effecting a

transformation or reduction of a particular article into a different state or thing,” or (4) “adding a specific limitation other than what is well understood, routine and conventional in the field, or adding unconventional steps that confine the claim to a particular useful application.” Final Act. 9.

*Alice/Mayo—Step 1 (Abstract Idea)*

Turning to the first step of the *Alice* inquiry, Appellants argue the claims are not directed to an abstract idea because:

- (1) “the Examiner provides absolutely no analysis,” “provides [only] conclusory statements that each element recited in the claim . . . is similar or identical to claims deemed unpatentable by the Federal Circuit,” and interpreted the claims at “a high level of abstraction and untethered from the language of the claims[,] all but ensur[ing] that the exceptions to § 101 swallow the rule” (App. Br. 11–15; Reply Br. 2);
- (2) Appellants’ claims, like the claims in *Enfish*, “recite several features that are operable specifically in the realm of computers to identify potentially inefficient asset activities through discrete abnormality criteria that are based on specific, computer-performed data manipulations of data collected by location-determining devices” and, as such, “are much more than simple and well-known computing functions, but provide complex and unique computer executed functions for identifying potentially inefficient asset behavior through the creation and use of a derivative data set based on data received by the computing system” (App. Br. 15–16; Reply Br. 5); and
- (3) Appellants’ claims, like the claims in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), “utilize discrete, objective criteria for identifying potentially inefficient asset behavior based on a specific manipulation of data to first create a derivative data set (identifying segmented operational data and

appropriate activity segment classifications based on the identified segments) that enables the identification of applicable abnormality criteria which, in turn, are applied to the received operational data to objectively identify potentially inefficient asset activities” (App. Br. 17) and “use computing devices in non-conventional ways to achieve an unconventional technological result that improves the functionality of computing systems” (Reply Br. 5–6).”

App. Br. 11–17; Reply Br. 2–5 (emphasis added).

Appellant’s arguments are not persuasive. First, the Examiner is required to review all claims at some level of generalization and characterize whether those claims are directed to an abstract idea under *Alice* step 1. However, there is no single definition of “abstract idea.” As the Federal Circuit succinctly put it:

The problem with articulating a single, universal definition of “abstract idea” is that it is difficult to fashion a workable definition to be applied to as-yet-unknown cases with as-yet-unknown inventions.

*Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016). Because there is no single definition of an abstract idea, the Federal Circuit instructs us “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.” *Id.* at 1294 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016); accord USPTO Memorandum, *July 2015 Update: Subject Matter Eligibility* (2015), <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf> (“USPTO Memorandum”) (instructing Examiners that “a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea”). In this case, the

Examiner did just what she was required to do under the USPTO Memorandum, has characterized the claims as required pursuant to *Alice*, and identified analogous claims as discussed in *Cyberfone*.

Second, Appellants' reliance on (1) *Enfish* and (2) *McRO* is misplaced. For example, *Enfish*'s patent claims were directed to an improved database architecture, i.e., a self-referential table — “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. Such a data structure has several distinct advantages over conventional relational databases, including: (1) faster searching of data than would be possible with the conventional relational model (*see* US 6,151,604, 1:55–59, 2:66–3:6); (2) more effective storage of data other than structured text, such as storage of images and unstructured text (*id.* at 2:16–22, 2:46–52); and (3) more flexibility in configuring the database (*id.* at 2:27–29).

In *Enfish*, “the focus of the claims [was] on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database).” *Enfish*, 822 F.3d at 1335–36. Based on the “plain focus of the claims,” the Federal Circuit reached the conclusion that *Enfish*'s claims were directed to “a specific improvement to the way computers operate, embodied in the self-referential table,” and, as such, were more than a mere abstract idea. *Id.* at 1336.

Similarly, *McRO*'s claims contain (i) specific limitations regarding a set of rules that “define[] a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence” to enable computers to produce “accurate and realistic lip synchronization and facial expressions in animated characters” and, when viewed as a whole, are

directed to (ii) a “technological improvement over the existing, manual 3–D animation techniques” that uses “limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice.” *McRO*, 837 F.3d at 1313, 1316.

In contrast to *Enfish* and *McRO*, Appellants’ claims and Specification are directed to “systems and methods for capturing and evaluating operational data in order to improve operational efficiencies in a variety of business contexts [e.g., asset efficiency].” Spec. 2:10–12. According to Appellants, “an asset management computer system [is provided] for assessing asset efficiency.” Spec. 2:14–15. One or more processors are configured to: “[1] receive operational data indicative of one or more asset dynamics for at least one asset during one or more time periods; [2] segment the operational data into a plurality of activity segments, the activity segments representing periods of time classified according to asset activity; and [3] determine, based on the operational data, one or more operational characteristics for each of the activity segments.” Spec. 2:18–22.

Based on Appellants’ claims and Specification, we agree with the Examiner that the claims are directed to an abstract idea of “assessing asset efficiency” based on input data, which is considered as a “fundamental economic practice.” Final Act. 6; Ans. 4. Such activities are squarely within the realm of abstract ideas. Assessing asset efficiency based on input data is a fundamental business practice prevalent in our system of commerce, like (1) the risk hedging in *Bilski v. Kappos*, 561 U.S. 593 (2010); (2) the intermediated settlement in *Alice*, 134 S. Ct. at 2356–57; (3) verifying credit card transactions in *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011); (4) guaranteeing

transactions in *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354 (Fed. Cir. 2014); (5) distributing products over the Internet in *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014); (6) determining a price of a product offered to a purchasing organization in *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015); and (7) pricing a product for sale in *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359 (Fed. Cir. 2015). Assessing asset efficiency based on input data is also a building block of a market economy and, like risk hedging and intermediated settlement, is an “abstract idea” beyond the scope of § 101. *See Alice*, 134 S. Ct. at 2356.

In addition, we also agree with the Examiner that the steps recited in Appellants’ claims 1 and 17 are merely receiving, processing, comparing, and identifying data of a specific content, e.g., operational data. Ans. 7. Information, as such, is intangible, and data analysis and comparisons, without more, are abstract ideas. *See, e.g., Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 fn.12 (2007); *Alice*, 134 S. Ct. at 2355; *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). “[C]ollecting information, including when limited to particular content (which does not change its character as information),” is “within the realm of abstract ideas.” *Elec. Power Grp.*, 830 F.3d at 1353–54; *see also Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource*, 654 F.3d at 1370.

Moreover, we note Appellants’ claims 1 and 7 do not improve the performance of a computer or solve a problem specific to computers or computer networks. Appellants’ Specification and arguments do not

demonstrate the 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. Neither the steps recited in Appellants’ claims 1 and 17, nor the rest of Appellants’ Specification supply any description or explanation as to how these data processing or analysis steps are intended to provide “a specific improvement to the way computers operate,” as explained in *Enfish*, 822 F.3d at 1336; or an “unconventional technological solution . . . to a technological problem” that “improve[s] the performance of the system itself,” as explained in *Amdocs*, 841 F.3d at 1300, 1302.

As further recognized by the Examiner (Final Act. 3), the steps recited in Appellant’s claims 1 and 17, such as: [1] “receiving operational data . . . indicative of one or more asset dynamics for at least one asset during one or more time periods;” [2] “segmenting said operational data into a plurality of activity segments;” [3] “determining . . . planned locations for each of said activity segments;” [4] “operational characteristics for each of the activity segments;” [5] “compiling . . . one or more operational characteristics for each of said activity segments;” [6] “determining . . . abnormality criteria for each of said activity segments;” [7] “comparing the location of the at least one asset during at least one activity segment against the planned location for the at least one asset during the at least one activity segment;” [8] “determining whether the location of the at least one asset during the at least one activity segment is within the threshold distance . . .”; [9] “identifying one or more of said activity segments indicating a potentially inefficient asset activity”; and [10] “generating a graphical display . . . of one or more of said activity segments” (*see* claim 17) are also mental steps that could be

performed in the human mind or by a human using a pen and paper. *See CyberSource*, 654 F.3d at 1372–73 (“[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under [section] 101.”); *see also In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) (“[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.”); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature,[] *mental processes*, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”) (emphasis added). Additionally, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”).

Accordingly, we agree with the Examiner that claims 1 and 17 are directed to an abstract idea of “assessing asset efficiency” based on input data. Final Act. 6; Ans. 4.

*Alice/Mayo—Step 2 (Inventive Concept)*

In the second step of the Alice inquiry, Appellants argue the claims recite elements that amount to “significantly more” [i.e., inventive concept] than the alleged abstract idea” because:

- (1) Appellants’ claims, like the claims in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.* 841 F.3d 1288 (Fed. Cir. 2016), “recite features for receiving specific operational data identifying the location and time at which the operational data was generated by a location determining device, for segmenting the data into activity segments and assigning activity segment classifications to each of those activity

segments to effectively provide enhanced data derived from that originally received, and for utilizing that enhanced data to identify and apply abnormality criteria to provide an objective methodology for identifying potentially inefficient asset behavior”; and

- (2) Appellants’ claims, like the claims in *DDR Holdings*, are “necessarily rooted in the realm of computer networks.”

App. Br. 18–21; Reply Br. 6–7.

Appellant’s arguments are not persuasive. Under current Federal Circuit precedent, an “inventive concept” under *Alice* step 2 can be established by showing, for example, that the patent claims:

- (1) provide a technical solution to a technical problem unique to the Internet, e.g., a “solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” (*see DDR*, 773 F.3d at 1257);
- (2) transform the abstract idea into “a particular, practical application of that abstract idea,” e.g., “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” (*see BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352, 1350 (Fed. Cir. 2016)); or
- (3) “entail[] an unconventional technological solution ([e.g.,] enhancing data in a distributed fashion) to a technological problem ([e.g.,] massive record flows [that] previously required massive databases)” and “improve the performance of the system itself” (*see Amdocs*, 841 F.3d at 1300, 1302).

In this case, however, we find no element or combination of elements recited in Appellant’s claims 1 and 17 that contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 134 S.Ct. at 2357. For example,

Appellant’s abstract idea of “assessing asset efficiency” based on input data is not rooted in computer technology; nor does it (1) provide any technical solution to a technical problem unique to the Internet as required by *DDR Holdings*; (2) provide any particular practical application as required by *Bascom*; or (3) entail an unconventional technological solution to a technological problem as required by *Amdocs*. Instead, Appellant’s invention simply uses a generic computing device and network, shown, for example, in Figures 1–23, to perform the abstract idea of “assessing asset efficiency” based on input data. Spec. 2:14–22; Abstract.

As recognized by the Examiner, the use of generic computer elements such as “a computer system, memory storage and processors” do not alone transform an otherwise abstract idea into patent-eligible subject matter. Final Act. 10. As our reviewing court has observed, “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR*, 773 F.3d at 1256 (citing *Alice*, 134 S.Ct. at 2358).

#### *Additional Argument*

Appellants argue that the claims “do not preempt the use of any abstract ideas recited.” App. Br. 21. However, this argument is not persuasive because, although “preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). “Where a patent’s claims are deemed only to disclose patent ineligible subject matter” under the *Alice/Mayo* framework, “preemption concerns are fully addressed and made moot.” *Id.*

Because Appellant’s claims 1 and 17 are directed to a patent-ineligible abstract concept and do not recite something “significantly more” under the second prong of the *Alice* analysis, we sustain the Examiner’s rejection of claims 1–4, 6, 7, 10–12, and 14–17 under 35 U.S.C. § 101.

#### CONCLUSION

On the record before us, we conclude Appellants have not demonstrated the Examiner erred in rejecting claims 1–4, 6, 7, 10–12, and 14–17 under 35 U.S.C. § 101.

#### DECISION

As such, we AFFIRM the Examiner’s rejection of claims 1–4, 6, 7, 10–12, and 14–17 under 35 U.S.C. § 101.

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