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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte SARAH L. ANDREWS, PENNAKI DAM, DAMIEN FRENNET,
SUMMIT CHAUDHURL, RICARDO RODRIGUEZ,
ASHOK GANAPAM, FRANK SCHILDER,
and
JOCHEN LOTHER LEIDNER

_____

Appeal 2017–008961
Application 13/337,662[1]
Technology Center 3600

_____

Before CARLA A. KRIVAK, HUNG H. BUI, and
NABEEL U. KHAN, *Administrative Patent Judges.*

KRIVAK, *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 1–38, which are all the claims pending
in the application. Claims App'x. We have jurisdiction under 35 U.S.C.
§ 6(b).

We affirm.[2]

_____

[1] Appellants identify the real party in interest as Thomson Reuters Global
Resources. App. Br. 1.
[2] Our Decision refers to Appellants' Appeal Brief ("App. Br.") filed January
9, 2017; Reply Brief ("Reply Br.") filed May 9, 2017; Examiner's Answer
("Ans.") mailed March 9, 2017; Final Office Action ("Final Act.") mailed

STATEMENT OF THE CASE

Appellants' invention relates to "relates generally to financial services and to the mining of information from conventional news sources and new/social media sources and other sources of content to discern sentiment and to predict behavior for pricing and recommendation" Spec. ¶ 2. "Appellants invention provides a News/Media Analytics System (NMAS) adapted to automatically process and 'read' news stories and content from blogs, twitter, and other social media sources, represented by news/media corpus, in as close to real-time as possible" and apply "one or more models against the content to determine green scoring and/or anticipate behavior of stock price and other investment vehicles" "to provide a sentiment-based solution for scoring the 'greenness' of companies." Abstract.

Claims 1 and 21. Claim 1 is illustrative of the claimed subject matter, as reproduced below with disputed limitations in *italics*:

> 1.   A computer implemented method comprising:
>   a)   identifying a first set of information derived from a first set of social media information, the set of social media information being individual commentary or interactions and relating to a first set of companies and a first set of news articles from a plurality of information sources, the first set of information being associated with the first set of companies, the first set of companies being associated with a set of securities, the first set of information comprising a subset of information other than securities transaction or regulatory filing information, wherein a set of sentiment scores are derived from the first set of social media information and are associated with the set of securities;
>   (b)   based upon the set of information, generating a composite index for the set of securities;

August 5, 2016; and original Specification ("Spec.") filed December 27, 2011.

> (c)   transmitting a first signal associated with the
> composite index, the first signal comprising a real-time stream,
> wherein the real-time stream is based at least in part on the set
> of sentiment scores associated with the set of securities in the
> composite index;
>
> (d)   providing a set of risk-indicating patterns on a
> computing device;
>
> (e)   identifying a second set of information derived
> from a second set of social media information, and identifying
> within the second set of information a set of potential risks by
> using a risk-identification-algorithm based, at least in part, on
> the set of risk-indicating patterns, the second set of information
> being individual commentary or interactions and relating to a
> second set of companies and a second set of news articles from
> the plurality of information sources and being identified in real
> time and being temporally more recent than the first set of
> information; and
>
> (f)   revising the composite index in substantially real
> time based on the second set of information and transmitting a
> second signal associated with the revised composite index, the
> second signal comprising the real-time stream, wherein the real-
> time stream is based at least in part on the set of risk-indicating
> patterns and the set of sentiment scores.

App. Br. 31 (Claims App'x).

REJECTIONS and REFERENCES

Claims 1 and 21 stand rejected under 35 U.S.C. § 112, first paragraph
as failing to comply with the written description requirement. Final Act. 10.

Claims 1 and 21 stand rejected under 35 U.S.C. § 112, second
paragraph as being indefinite. Final Act. 11.

Claims 1–38 stand rejected under 35 U.S.C. § 101 because the
claimed invention is directed to non-statutory subject matter. Final Act. 7–
10.

Claims 1–6, 10–14, 17, 19–21, 23–26, 29–32, 35, 37, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouimet (US 2008/0243716 A1; published Oct. 2, 2008), Peitersen (US 2009/0150316 A1; published June 11, 2009) and Hoogs (US 2005/0071217 A1; published May 31, 2005). Final Act. 12–33.

Claims 7–9, 22, 27, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouimet, Peitersen, Hoogs, and Lawrence (US 2006/0004878 A1; published Jan. 5, 2006). Final Act. 33–39.

Claims 15, 16, 33, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouimet, Peitersen, Hoogs, and Wennberg (US 2006/0129427 A1; published June 15, 2006). Final Act. 39–43.

Claims 18 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouimet, Peitersen, Hoogs, and Beldock (US 6,490,565 B1; issued Dec. 3, 2002). Final Act. 43–45.

ANALYSIS

35 U.S.C. § 112, First Paragraph: Claims 1 and 21

In support of the § 112, first paragraph written description rejection of claims 1 and 21, the Examiner finds the limitation "wherein a set of sentiment scores are derived from the first set of social media information and are associated with the set of securities" is not disclosed in Appellants' Specification. Final Act. 10. The Examiner acknowledges paragraphs 22 and 43 of the Specification describe "that sentiment scores may be derived from text and metadata," but nevertheless asserts that the Specification does not provide adequate written description as to "how to derive sentiment scores." Final Act. 10.

Appellants argue the Examiner erred because paragraphs 22, 40, 43–44, 51–52, 55, 65, and 68–71 of the Specification describe the "method for determining a 'sentimental score,'" including "how sentiment may be scored," "factors that may be considered," and "the types of analysis that may be used" (e.g., ontologies, Reuters NewsScope Sentiment Engine). App. Br. 20–21. For example,

> The sentiment score, generally "may be derived from text and metadata from news/media and may apply a predefined or learned lexicon-based and/or sentiment pattern to the processed text/metadata." Spec. para. [0022]. The processes that may be used to objectively quantify "human sentiment concerning green issues" may include a probabilistic value or relationship or Bayesian networks applied to data collected from social media sources to "derive a green score or rating based on the determined sentiment." Spec. para. [0040]. The sentiment score itself may be "positive, negative or neutral, with respective scores of +1, -1, and 0" and is derived by the sentiment processing module 125 from the text or metadata in the social media information from the social media sources. Spec. para. [0043].

Reply Br. 5.

The Examiner maintains the position that (1) "none of these paragraphs describes how to arrive at a sentiment score by processing news information," (2) "[t]he names of analyses, such as 'ontologies' or 'Reuters NewsScore [sic NewsScope] Sentiment Engine' do not provide any structure to the recited sentiment score," and (3) "the source of a score is adequate to demonstrate possession, but the source of a calculation does not demonstrate possession of the calculation itself." Ans. 12.

We disagree with the Examiner. At the outset, we note a *written description* requirement is separate and distinct from an *enablement*

requirement under 35 U.S.C. § 112, first paragraph. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). For example, to comply with the *enablement* requirement under 35 U.S.C. § 112, first paragraph, Appellants' Specification must adequately teach how to make and how to use a claimed invention throughout its scope, without undue experimentation. *Plant Genetic Sys. N.V. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1339 (Fed. Cir. 2003). Naturally, the specification must teach those of skill in the art "how to make and how to use the invention as broadly as it is claimed." *In re Vaeck*, 947 F.2d 488, 496 (Fed. Cir. 1991).

In contrast to the *enablement* requirement, the *written description* requirement under 35 U.S.C. § 112, first paragraph only requires Appellants to "reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad*, 598 F.3d at 1351. "[T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." *Id.* However, "the disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue." *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000). In some cases, "drawings alone may provide a 'written description' of an invention as required by § 112." *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1565 (Fed. Cir. 1991). Regardless, the disclosure must convey with reasonable clarity to those skilled in the art that the inventor was in possession of the invention. *Id.* at 1563–1564. Here, Appellants have shown that there is sufficient structure and description in the specification as filed.

For example, the limitation "wherein a set of sentiment scores are derived from the first set of social media information and are associated with the set of securities" is recited as part of the original claims 5–10, 20, 22, and 25–29 as filed. Paragraphs 22, 40, 43, 52, 55, and 69 of Appellants' Specification provide written description support for this disputed limitation in claims 1 and 21. Similarly, Figures 3 and 4 also show written description support for the disputed limitation in claims 1 and 21.

Because Appellants have "reasonably convey[ed] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date," we do not sustain the § 112, first paragraph rejection of claims 1 and 21 for failure to comply with the "written description" requirement.

35 U.S.C. § 112, Second Paragraph: Claims 1 and 21

In support of the § 112, second paragraph rejection of claims 1 and 21, the Examiner finds the term "sentiment score" is indefinite. Final Act. 11. For the same reasons discussed above, we agree with Appellants that a skilled artisan would understand the term "sentiment score" in the context of Appellants' Specification. As such, we do not sustain the Examiner's § 112, second paragraph, rejection of claims 1 and 21.

35 U.S.C. § 101: Claims 1–38

In *Alice Corp. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the Supreme Court reiterates an analytical two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 79 (2012), "for distinguishing patents that claim laws of nature,

natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *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 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).

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).

In rejecting claims 1–38 under 35 U.S.C. § 101, the Examiner determines: (1) these claims are directed to an abstract idea of "generating a composite index for a set of securities" (Final Act. 8), and includes limitations such as "steps for (a) identifying information from sources, (b) generating an index, (c) transmitting a signal, (d) providing patterns, (e) identifying second information, and (f) revising the index" that are nothing more than "steps for data gathering, data manipulation, and data reporting related to the generation of an index" (Ans. 4); and (2) the additional elements in the claims, whether taken separately or in an ordered combination, are all steps for data manipulation that do not amount to

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significantly more than the abstract idea, because (i) "the claims do not recite an improvement to another technology or technical field, nor do they recite an improvement to the functioning of the computer itself" and (ii) "the claims require no more than a generic computer . . . to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the industry." Final Act. 7–8; Ans. 4–5. The Examiner also determines these claims are directed to an abstract idea because the process recited in these claims can be implemented mentally or performed manually by a human with pen and pencil. Ans. 6; *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011).

At the outset, Appellants argue "claim 1 recites statutory subject matter pursuant to 35 U.S.C. § 101" under the so-called "machine-or-transformation" (MoT) test established by the Federal Circuit in *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (en banc). Under *Bilski's* MoT test, a claimed process can be considered patent-eligible under § 101 if: (1) "it is tied to a particular machine or apparatus"; or (2) "it transforms a particular article into a different state or thing." *Bilski*, 545 F.3d at 954 (citing *Gottschalk*, 409 U.S. at 70, 93; S. Ct. 253). However, Appellants' reliance on the MoT test is misplaced.

In *In re Bilski*, the Federal Circuit adopted a "machine-or-transformation" (MoT) test to determine whether a process claim is eligible under 35 U.S.C. § 101. However, the Supreme Court held, in *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010), that the "MoT" test, while a "useful and important clue," is no longer the sole test for determining the patent-eligibility of process claims under § 101. Since *Bilski v. Kappos*, the Supreme Court has created a two-step framework in *Alice*, 134 S. Ct. at

2354 to address whether a claim falls outside of § 101, which we discuss *infra*.[3]

Alice/Mayo—Step 1 (Abstract Idea)

Turning to the first step of the *Alice* inquiry, Appellants argue "the Examiner's characterization of the claim is overly broad," citing *Enfish,* 822 F.3d at 1336 and a memorandum from Robert W. Bahr, Deputy Commissioner for Patent Examination Policy, to Patent Examining Corps, *Recent Subject Matter Eligibility Decisions* (May 19, 2016) (which warn against "describing the claims at such a high level of abstraction and untethered from the language of the claims" and suggest such an abstraction will "all but ensure[] that the exceptions to § 101 swallow the rule.") App. Br. 10. Appellants assert "[t]he subject matter of the claimed invention is not abstract and is far removed from the concepts of simply just 'generating a composite index' . . . does not involve a 'method of organizing human activity.'" App. Br. 10–11.

Appellants then argue "Claim 1 is not merely directed towards an abstract idea" because:

> (1) the Supreme Court's decision in *Alice* "narrowed the concept of 'abstract ideas' to those concepts which are "fundamental and prevalent" and "concepts which have been in use for an extensive period of time as "hedging risk or using a settlement

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[3] As recognized by the Federal Circuit in *Ultramercial, Inc. v. Hulu, LLC,* 772 F.3d 709, 716 (Fed. Cir. 2014), *Bilski's* "machine-or-transformation" (MoT) test can also provide a "'useful clue'" in the second step of the *Alice* framework. *See In re Bilski,*[3] 545 F.3d 943, 954 (Fed. Cir. 2008) (en banc). However, Appellants' method claim 1 and its corresponding system claim 21 are neither sufficiently "tied to a particular machine or apparatus" nor involved in any type of transformation of any particular article for reasons discussed *infra*.

intermediary" [as outlined in claims of *Bilski* and *Alice*] whereas the subject matter of Appellants' claims is a modern concept outside the scope of what is an "abstract idea" and is "far removed from the concepts of risk hedging, intermediated settlements and certain methods of organizing human activities and solves a problem unique to determining the greenness and/or environment compliance of a public or private entity by processing new stories, filings, new/social media and other content available and quickly interpreting this content to assess the environmental impact of that entity" (App. Br. 11–12);

(2)   similar to "the claims at issue in *Enfish* and [*McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)], the claimed invention provides a technological improvement that is not directed towards an abstract idea. The claimed method provides an improvement over the prior art methods by at least identifying, associating, generating, transmitting, transforming, calculating and revising results in near real-time from numerous different sources comprising large corpuses of data, such as social media sites or news filings" (App. Br. 12); and

(3)   similar to *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), Appellants' "invention also solves a problem unique to effectively processing and managing large corpuses of electronic data from different sources and further manipulating this data to calculate a score for an entity." (App. Br. 15)

App. Br. 10–15.

Appellants' arguments are not persuasive. At the outset, we note Appellants' characterizations of the Supreme Court's decision in *Alice* and the Federal Circuit's decisions in *Enfish* and *McRO* are incorrect. The Supreme Court's decision in *Alice* is not limited to those "business method" concepts that are "fundamental and long prevalent" or concepts that have been in use for an extensive period of time, such as "the risk hedging claims

of *Bilski* and the intermediate settlement concept at issue in *Alice*," as

Appellants argue. App. Br. 11–12. Rather, as recognized by the Examiner,

the Federal Circuit has identified numerous examples of "business method"

concepts as "abstract ideas" that are not fundamental or, long prevalent.

Ans. 5 (citing PTO's examples located at

https://www.uspto.gov/sites/default/files/documents/ieg-duly-2015-qrs.pdf).

     Appellants' Specification is directed to "a system for automatically

processing or 'reading' news stories, filings, new/social media and other

content and for applying predictive models against the content to anticipate

behavior of stock price and other investment vehicles" "to provide a

sentiment-based solution that expands the scope of conventional tools to

include social media and online news." Spec. ¶ 18; Abstract. Embodiments

of Appellants' Specification, such as depicted in Figures 3–4, describe

processing news/social media (e.g., documents, messages, other content)

(Fig. 3, step 302), applying a sentiment analysis to arrive at a sentiment

score (Fig. 3, step 304), applying a predictive model using the sentiment

score to arrive at a green score (Fig. 3, step 310), and generating a composite

index of a set of green scores (Fig. 3, step 312). Thus, we agree with the

Examiner that the claims are directed to an abstract idea of "calculating a

green score [of an entity]" based on received data. Ans. 4.

     All the steps recited in Appellants' claim 1, including: (a) identifying

information from sources, (b) generating an index, (c) transmitting a signal,

(d) providing patterns, (e) identifying second information, and (f) revising

the index are abstract processes of collecting, storing, and analyzing

information of a specific content, e.g., news/media are directed to content

regarding an entity for generating an index score associated with a set of securities.

Information, as such, is intangible, and data analysis, comparisons, and algorithms, by themselves, are abstract ideas. *See, e.g., Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12 (2007); *Alice*, 134 S. Ct. at 2355; *Parker v. Flook*, 437 U.S. 584, 589, 594–95 (1978) ("Reasoning that an algorithm, or mathematical formula, is like a law of nature, *Benson* applied the established rule that a law of nature cannot be the subject of a patent"); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). "[C]ollecting information collection and analysis, including when limited to particular content (which does not change its character as information)," and "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more," are "within the realm of abstract ideas." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016); *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. That is, "[w]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible." *Digitech*, 758 F.3d at 1349–50 ("Data in its ethereal, non-physical form is simply information that does not fall under any of the categories of eligible subject matter under section 101").

As also recognized by the Examiner (Ans. 6), "generating a composite index for a set of securities" can also be performed mentally or by 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 § 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. at 67 ("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 could be done mentally with pen and paper. *Bancorp Servs., L.L.C. v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter."); *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*."). Contrary to Appellants' arguments, all the steps recited in Appellants' claim 1, including: (a) identifying information from sources, (b) generating an index, (c) transmitting a signal, (d) providing patterns, (e) identifying second information, and (f) revising the index are nothing more than collecting, storing, and analyzing information of a specific content that can also be performed mentally or by using pen and paper. Ans. 4.

Separately, and contrary to Appellants' arguments, Appellants' claims 1 and 21 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.

In fact, neither the steps recited in Appellants' claims 1 and 21, nor the rest of Appellants' Specification supply any description or explanation as to how these data processing steps are intended to provide: (1) a "solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," as explained by the Federal Circuit in *DDR* 773 F.3d at 1257; (2) "a specific improvement to the way computers operate," as explained in *Enfish*, 822 F.3d at 1336; or (3) an "unconventional technological solution . . . to a technological problem" that "improve[s] the performance of the system itself," as explained in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1302 (Fed. Cir. 2016).

Accordingly, we agree with the Examiner that claims 1–38 are directed to an abstract idea of "generating a composite index for a set of securities."

Alice/Mayo—Step 2 (Inventive Concept)

In the second step of the *Alice* inquiry, Appellants argue the claim elements, taken as a whole, amount to significantly more than an abstract idea because: (1) "subject matter [that] provides something that cannot possibly be done on pen and paper . . . may be patentable subject matter," citing *California Institute of Technology v. Hughes Communications, Inc.*, 59 F. Supp. 3d 974 (C.D. Cal. 2014); (2) the claimed invention, i.e., "providing a set of risk-indicating patterns on a computing device" is a specific data structure that "is not a general purpose computer and is not known in the art"; and (3) the "Examiner has not considered each and every

claim element of **all** the claims **both independently <u>and</u> as an ordered combination**." App. Br. 15–19.

We disagree. At the outset, we note Appellants' reliance on *California Institute of Technology* is misplaced because district court decisions are not binding legal authority on the Board. Further, the district court's holding that claims directed to "methods of error correction in data transmission" were not directed to an abstract idea is not analogous to Appellants' claims being directed to "generating a composite index for a set of securities" based on received data.

According to the Supreme Court in *Alice*, 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.'" *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 72–73). The Federal Circuit cases on point include (1) *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) and (2) *Amdocs*, 841 F.3d 1288.

In *DDR* and *Amdocs*, the Federal Circuit opted to bypass *Alice* step 1 in favor of step 2. In particular, the Federal Circuit found *DDR's* claims contain an "inventive concept" under *Alice* step 2 because *DDR's* claims (1) do not merely recite "the performance of some business practice known from the pre-Internet world," such as previously disclosed in *Bilski* and *Alice*, but instead (2) provide a technical solution to a technical problem unique to the Internet, *i.e.*, a "solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *DDR*, 773 F.3d at 1257. Likewise, the Federal Circuit also found *Amdocs'* claims contain a sufficient "inventive concept"

because like *DDR*, *Amdocs'* claims "entail[] an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases)" and "improve the performance of the system itself." *Amdocs*, 841 F.3d at 1300, 1302.

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 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 the present case, however, we find no element or combination of elements recited in Appellants' claims 1 and 21 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. As discussed *supra*, we are not persuaded the added computer elements (such as

a processor, memory, and various software module) can transform the abstract idea into a patent-eligible invention. 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 seek to tie up or preempt an entire field, i.e., an abstract idea of "generating a composite index using social media sources data and sentiment analysis." App. Br. 14. 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 Appellants' claims 1 and 21 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 1–38 under 35 U.S.C. § 101.

35 U.S.C. § 103(a): Claims 1–38

With respect to claims 1 and 21, Appellants contend "none of the cited references [including Ouimet, Hoogs, and Peitersen] teach, disclose, or suggest a first signal comprising a real-time stream and a second signal comprising a real-time stream as claimed." App. Br. 25. Particularly,

Appellants acknowledge Ouimet teaches a user's ability to select, update, or revise information to be included in a portfolio, but argue that "Ouimet does not transmit any information in real-time as claimed." App. Br. 25–26 (citing Ouimet ¶¶ 34–35, 54, 57). Similarly, Appellants acknowledge Hoogs also teaches a user's ability to update the business risk analysis, including weights of all events used to calculate the overall risk of the scenario, but argue "Hoogs also does not teach a real-time stream as claimed." App. Br. 26 (citing Hoogs ¶ 50). Likewise, Appellants argue "Peitersen does not teach **transmitting a signal** comprising a real-time stream as claimed." App. Br. 26.

Appellants' arguments are not persuasive. Rather, we find the Examiner has provided a comprehensive response to Appellants' arguments supported by a preponderance of evidence. As such, we adopt the Examiner's findings and explanations provided therein. Ans. 13–14. For example, Peitersen's express reference to "real-time" in the context of a database 20, shown in Figure 3, is sufficient to meet Appellants' claimed "real-time" processing of data. Ans. 13–14. Moreover, and contrary to Appellants' arguments, Ouimet also teaches (1) a user's ability to engage in "an interactive, web-based merchant platform [or web-based, self-service platform] for investment services where the user can interact with many various information service providers" (Ouimet ¶¶ 35, 42); and (2) online services where information can be provided automatically or manually-initiated by a user, via the platform (Ouimet ¶¶ 50, 56). Ouimet's disclosure suggests to an ordinarily skilled artisan that all the steps of data gathering and processing are handled in "real-time" or "near real-time."

For these reasons, we sustain the Examiner's obviousness rejection of independent claims 1 and 21, and their respective dependent claims 2–6, 12–14, 17, 19–21, 23–26, 29–32, 35, 37, and 38, which Appellants do not argue separately.

With respect to dependent claims 10 and 11, Appellants argue Ouimet does not teach "applying a predictive model as claimed." App. Br. 26–27. We disagree. As recognized by the Examiner, Ouimet teaches "correlative behavior between assets using a model predicted value" and adjusting "a model predicted value." Ans. 14 (citing Ouimet ¶¶ 67–68). Moreover, Ouimet's disclosure is predicated upon providing various models (whether online Internet or otherwise) to a user (investor) to manage and direct his or her portfolio and investment activities. Ouimet ¶¶ 33–34. As such, we also sustain the Examiner's obviousness rejection of claims 10 and 11.

For the same reasons discussed relative to claims 1 and 21, we also do not sustain the Examiner's remaining obviousness rejections, which include: (1) claims 7–9, 22, 27, and 28 over Ouimet, Peitersen, Hoogs, and Lawrence; (2) claims 15, 16, 33, and 34 over Ouimet, Peitersen, Hoogs, and Wennberg; and (3) claims 18 and 36 over Ouimet, Peitersen, Hoogs, and Beldock, which Appellants do not argue separately.

DECISION

The Examiner's rejection of claims 1 and 21 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, is reversed.

The Examiner's rejection of claims 1 and 21 under 35 U.S.C. § 112, second paragraph as being indefinite, is reversed.

The Examiner's rejection of claims 1–38 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1–38 under 35 U.S.C § 103(a) is affirmed.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision rejecting claims 1–38. *See* 37 C.F.R. § 41.50(a)(1).

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