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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* PAUL A. BAUERSCHMIDT, ARI L. STUDNITZER,  
WILLIAM J. ALBERT, PAUL J. CALLAWAY, JAMES W. FARRELL,  
and AGNES SHANTHI THIRUTHUVA DOSS

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Appeal 2018-000533  
Application 14/195,581  
Technology Center 3600

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Before MURRIEL E. CRAWFORD, PHILIP J. HOFFMANN, and  
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 20–37 and 39. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

## THE INVENTION

Appellant claims computer implemented methods to allow over the counter futures products to be traded in a centralized matching and clearing environment which permits implying/interpolating price in one of multiple inter-related markets based on (sufficient) pricing data known in the remaining markets. (Spec. ¶¶ 11, 188). Specifically, the invention relates to a method for generating a new order book for a product when an order book for the product is not available. (Spec. ¶¶ 195–197).

Claim 20 is representative of the subject matter on appeal.

20. A computer implemented method for creating an order book, for independently transacting a product, based on other products each having a separate order book associated therewith, the method comprising:

receiving, by a computer processor coupled with an exchange computer system, a transaction request for a new product comprising first and second components;

determining, by the computer processor based on the receipt of the transaction request, that an order book for the new product is not available by which the transaction request may be processed as a single transaction without separately processing a transaction for the first component and a transaction for the second component, and based on the determination that the order book for the new product is not available:

identifying, by the computer processor, a first available order book for a first available product listed on the exchange and a second available order book for a second available product listed on the exchange, the first available product comprising a first component and the second available product comprising a second component, the first and the second components forming the new product;

generating, by the computer processor, a new order book for the new product based on the first and second available products; and

causing, by the computer processor, the new product to be listed on the exchange such that, independent of the first and second available order books, subsequently received orders to buy or sell the new product are matched based on the new order book or entered into the new order book.

### THE REJECTION

Claims 20–37 and 39 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

Claims 20–37 and 39 are rejected under 35 U.S.C. § 112(a), first paragraph, as failing to comply with the written description requirement.

Claims 20–37 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnston (US 2006/0173771 A1, published Aug. 3, 2006) in view of Boies (US 2002/0103741 A1, published Aug. 1, 2002) and in further view of Neyman (US 2002/0107781 A1, published Aug. 8, 2002)

### ANALYSIS

#### 35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 20–37 and 39 under 35 U.S.C. § 101.

#### The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. . . . If so, . . . then ask, “[w]hat else is there in the claims before us?” . . . To answer that question, . . . consider the elements of each claim both individually and “as an ordered combination” to determine

whether the additional elements “transform the nature of the claim” into a patent-eligible application. . . . [The Court] described step two of this analysis as a 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 Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)) (citations omitted).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract idea” for which computers are invoked merely as a tool. *See id.* at 1335–36.

In so doing we apply a “directed to” two prong test: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the judicial exception is integrated into a practical application. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 50–57 (Jan. 7, 2019) (“*Guidance*”).

The Examiner determines that the claims are directed to generating a new order book for a new product, (Final Act. 25). The Examiner determines that the concepts of the invention relate to the economy and

commerce and therefore the claims are directed to an abstract idea. (Final Act. 26).

The Specification discloses that the disclosed systems and methods relate to allowing trading of over the counter foreign exchange contracts on a centralized matching and clearing mechanism such as that of the Chicago Mercantile Exchange's futures exchange system. (Spec. ¶ 29). The invention is operative to determine at least one buy price for a new product based on the at least one buy price of the first product and the at least one buy price for a second product. (Spec. ¶ 196). This disclosure supports the Examiner's determination that the claims recite concepts that relate to the economy and commerce.

Consistent with this disclosure, claim 20 recites "receiving . . . a transaction request," "determining . . . an order book for a new product is not available," "identifying . . . a first available order book for a first available product listed . . . and a second available order book for a second available product listed on the exchange," and "generating . . . a new order book for the new product based on the first and second available products."

As such, we agree with the Examiner that claim 20 recites a method that relates to the economy and commerce which is a certain method of organizing human activities, i.e., a fundamental economic practice.

*Guidance* 84 Fed. Reg. 52.

Also, we determine that the steps of receiving data in the form of a transaction request for a product, analyzing that data to determine whether an order book is available for the product such that the transaction can be processed without processing a first component and second component separately and if not generating data in the form of a new order book based

on the first and second product constitute “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claims directed to certain arrangements involving contractual relations are directed to abstract ideas). Thus, we find that the claims recite the judicial exception of a mental process.

Turning to the second prong of the “directed to test,” claim 20 requires a “processor.” The recitation of the word “processor” does not impose “a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Guidance 84 Fed. Reg. at 53. We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in independent claim 20 invoke any inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in computer technology and/or

functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the revised Guidance. *See Guidance*, 84 Fed. Reg. at 55.

In this regard, the recitation does not affect an improvement in the functioning of the claimed processor or any other technology, does not recite a particular machine or manufacture that is integral to the claims, and does not transform or reduce a particular article to a different state or thing. *Id.* Thus, claim 20 is directed to a judicial exception that is not integrated into a practical application and thus is directed to an “abstract idea.”

Turning to the second step of the *Alice* analysis, because we find that claim 20 is directed to an abstract idea, the claim must include an “inventive concept” in order to be patent-eligible, i.e., there must be an element or combination of elements that is sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself. *See Alice*, 573 U.S. at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

The introduction of a processor into the claims does not alter the analysis at *Alice* step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent

eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

*Alice*, 573 U.S. at 223 (alterations in original) (citations omitted).

Instead, “the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 225. They do not.

Taking the claim elements separately, the function performed by the processor at each step of the process is purely conventional. Using a processor to retrieve, select, and apply decision criteria to data and modify the data as a result amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the trading industry. *See Elec. Power Grp.*, 830 F.3d at 1354; *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”). In short, each step does no more than require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am. Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1022 (Fed. Cir. 2018).

In regard to consideration of claim 20 as an ordered combination, we note that claim 20 only recites a computer processor and thus no combination of components is recited.

The sequence of data reception-analysis-access/display is equally generic and conventional or otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (holding that sequence of data retrieval, analysis, modification, generation, display, and transmission was abstract), *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (holding sequence of processing, routing, controlling, and monitoring was abstract). The ordering of the steps is, therefore, ordinary and conventional.

Claim 20 does not, for example, purport to improve the functioning of the computer processor itself. As we stated above, claim 20 does not affect an improvement in any other technology or technical field. The Specification spells out different generic equipment and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of information access under different scenarios. (*See, e.g.*, Spec. ¶ 124). Thus, claim 20 at issue amounts to nothing significantly more than instructions to apply the abstract idea of information access using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 226.

We have reviewed all the arguments (Appeal Br. 5–15; Reply Br. 1–6) Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. We find that our analysis above substantially covers the substance of all the arguments, which have been made. But, for purposes of completeness, we will address various arguments in order to make individual rebuttals of same.

We are not persuaded of error on the part of the Examiner by Appellant’s argument that the claims recite patent eligible subject matter because the claims does not preempt the entire idea of financial trading of products. (Appeal Br. 6). “While 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); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 701, 193 (2015) (citation omitted) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). And, “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

We are also unpersuaded of error on the part of the Examiner by Appellant’s argument that the claims are rooted in computer technology and solve a unique problem in electronic trading systems. (Appeal Br. 5, 7). In making this argument, Appellant relies on *Trading Technologies Int’l, Inc. v. CQG., Inc.*, 675 F. App’x 1001 (Fed. Cir. 2017). The claims in *Trading Techs.* recited “dynamically displaying a second indicator in one of a

plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the common static price axis.” No such dynamic positioning of data is recited in the claims at hand. In a related precedential *Trading Techs.* case, the Court held “[t]he claims are focused on providing information to traders in a way that helps them process information more quickly, not on improving computers or technology.” *Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (“*Trading Techs II*”). Similarly, the claims here are focused on providing information to users in a way that helps them process information more quickly, not on improving computers or technology. In this regard, we agree with the Examiner’s finding on page 9 of the Answer that *Trading Techs.* claimed an improvement to the technology of graphical user interface for trading purposes which had specific structure and concordant functionality. There is no specific structure and functionality claimed here.

We are not persuaded that the Examiner erred by Appellant’s argument that the claimed combination is a specific implementation which has not been used before and is novel and therefore is not well-understood, routine or conventional in the art. (Appeal Br. 9, 13). The analysis of whether the claims recite well understood, routine and conventional elements, as we explained above, is done in the second step of the *Alice* analysis, i.e., whether the claims include significantly more than the abstract idea. The only recitation in claim 20 that is not a part of the abstract idea of generating a new order book for a new product, is the recitation of a “computer processor.” Appellant does not argue that the processor utilized in the instant application receives, processes and transmits data in other than

a well-understood, routine and conventional manner.

To the extent Appellant maintains that the limitations of claim 20 necessarily amount to “significantly more” than an abstract idea because the claimed implementation is allegedly novel, Appellant misapprehends the controlling precedent. Although the second step in the *Alice/Mayo* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, 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*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 73). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

We are not persuaded of error on the part of the Examiner by Appellant’s argument that the claimed invention reduces the computational load on the electronic trading system (Appeal Br. 10). The difficulty with this argument is that we can find no basis for it in the claim or the Specification. Appellant has not directed us to a place in the record where there is any suggestion that a problem of computational overload has been solved by following the recited steps of the trading scheme as claimed on a generic computer. As the argument is not commensurate in scope with what is claimed, because the record does not reflect it, it amounts to mere attorney argument. Attorney argument, however, cannot take the place of record evidence. *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989).

In view of the foregoing, we will sustain the Examiner’s rejection of claim 20. We will also sustain the rejection as it is directed to claims 21–33

because Appellant has not argued the separate eligibility of these claims.

We do not agree with the Appellant that claim 34 recites a special purpose computer (Appeal Br. 14–15). According to the Appellant the claims recite means-plus-function elements that amount to a specific algorithm that transforms an otherwise general purpose computer into a special purpose computer programmed to perform the recited functions.

Appellant’s argument is not persuasive because Appellant does not explain what this specific algorithm is or how it transforms the general purpose computer into a special purpose computer. Essentially, Appellant is arguing that inclusion of the phrase “means for” in a claim imparts a meaningful limitation or adds significantly more to the abstract idea. We disagree. While it is true that a particular “corresponding structure, material, or acts described in the specification” may impart a meaningful limitation in a 35 U.S.C. § 112(f) context, the mere inclusion of the phrase “means for” in a claim does not have that effect. Steps that do nothing more than spell out what it means to “apply it on a computer” cannot confer patent-eligibility. *Alice*, 573 U.S. at 224, (warning against a § 101 analysis that turns on the draftsman’s art (citing *Parker v. Flook*, 437 U.S. 584, 593 (1978))).

In view of the foregoing, we will sustain this rejection as it is directed to claim 34. We will also sustain the rejection as it is directed to claims 35–37 and 39 because Appellant has not argued the separate eligibility of these claims.

#### 35 U.S.C. § 112, FIRST PARAGRAPH REJECTION

We will not sustain this rejection. The Examiner finds that there is no support for the recitation in claim 20 of “determining . . . that an order book for the new product is not available . . . .”

The Specification discloses:

upon receipt of a request to transact in a particular product, such as via a request receiver (not shown) or other interface, the Exchange 108 determines whether a market for the particular product exists. If a market exists, the transaction proceeds as described herein. However, if the Exchange is unable to identify an existing market, a request is transmitted to the implied spread processor 1302 identifying the requested product. Alternatively, all transaction requests may be filtered through the implied spread processor 1302, such as via request receiver (not shown) or other interface, which determines whether a market for the requested product exists. If a market exists, the request is passed to the Exchange 108 as usual. If a market for the requested product does not exist, the implied spread processor 1302 operates as described.

Spec. ¶ 192.

We note that the Specification at paragraph 189 discloses that an “order book” and a “market” are the same thing. Therefore, Appellant is correct that the Specification provides support for this recitation.

### 35 U.S.C. § 103 REJECTION

We will not sustain this rejection because we agree with Appellant that the prior art does not disclose “the first and second components forming the new product,” “generating . . . a new order book for the new product based on the first and second available products,” and “causing . . . the new product to be listed on the exchange.” From these recitations, it is clear that the new product is a product that includes the first and second products and that this product is listed as a new order book on the exchange.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of

obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988).

The Examiner relies on Figure 5 of Johnston and accompanying disclosure for teaching this subject matter. We find that Figure 5 of Johnston discloses that two products, the purchase of US dollars with Japanese yen and the purchase of Swiss francs with US dollars are combined in an implied order. It is unclear, however, how the purchases are done. In other words, it is unclear from this figure whether these two purchases are actually combined so that francs are purchased with yen or whether the purchase of dollars is done first followed by the purchase of francs. Further, it is not clear that a new product, i.e., the purchase of francs with yen is listed as a new order book on an exchange.

Therefore, we will not sustain this rejection of claim 20 and claims 21–26. We will not sustain this rejection as it is directed to the remaining claims for the same reason.

#### CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 20–37 and 39 under 35 U.S.C. § 101 but did err in rejecting these claims under 35 U.S.C. §§ 112, first paragraph and 103(a).

DECISION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
20–37, 39	101	Eligibility	20–37, 39	
20–37, 39	112, first paragraph	Written Description		20–37, 39
20–37, 39	103(a)	Johnston, Boies, Neyman		20–37, 39
<b>Overall Outcome</b>			20–37, 39	

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

AFFIRMED