

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**IN RE: DOUGLAS T. CHORNA,**  
*Appellant*

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2016-1324

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. 12/029,610.

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Decided: August 10, 2016

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DOUGLAS T. CHORNA, Delray Beach, FL, pro se.

THOMAS W. KRAUSE, Office of the Solicitor, United  
States Patent and Trademark Office, Alexandria, VA, for  
appellee Michelle K. Lee. Also represented by BRIAN  
RACILLA, ROBERT J. MCMANUS.

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Before PROST, *Chief Judge*, WALLACH and HUGHES, *Circuit  
Judges*.

PER CURIAM.

Douglas T. Chorna filed U.S. Patent Application No.  
12/029,610 (“the ’610 application”) in 2008, which is  
entitled “System and Method for Implementing the Struc-  
turing, Pricing, Quotation, and Trading of Hindsight

Allocation Instruments.” In 2011, the patent examiner rejected claims 1–25 of the ’610 application as indefinite and obvious, as well as for claiming patent-ineligible subject matter. *See* J.A. 164–72 (new Non-Final Office Action after prosecution was reopened). Following Mr. Chorna’s appeal, the United States Patent and Trademark Office’s Patent Trial and Appeal Board (“the PTAB”): 1) reversed the examiner’s indefiniteness and obviousness rejections; and 2) affirmed the examiner’s subject matter rejection under 35 U.S.C. § 101 (2006).<sup>1</sup> *See Ex Parte Chorna*, No. 2012-009801 (P.T.A.B. May 29, 2015) (J.A. 2–9).

Mr. Chorna appeals the PTAB’s affirmance of the examiner’s § 101 rejection. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A) (2012). For the reasons below, we affirm.

## DISCUSSION

### I. Standard of Review

We review de novo the PTAB’s determination with respect to patent eligibility under § 101. *In re Ferguson*, 558 F.3d 1359, 1363 (Fed. Cir. 2009); *see In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008) (en banc), *aff’d sub nom. Bilski v. Kappos*, 561 U.S. 592 (2010).

### II. The ’610 Application Is Patent-Ineligible Under 35 U.S.C. § 101

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and require-

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<sup>1</sup> In passing the Leahy-Smith America Invents Act, Congress did not amend § 101. *See generally* Pub. L. No. 112-29, 125 Stat. 284 (2011).

ments of” Title 35 of the United States Code. 35 U.S.C. § 101.

The Supreme Court has “long held that this provision contains an important implicit exception[:] Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal quotation marks and citation omitted). “Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (internal quotation marks and citation omitted).

However, “an invention is not rendered ineligible for patent simply because it involves an abstract concept.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). In *Alice*, the Supreme Court reiterated *Mayo*’s two-part test through which we assess patent eligibility under § 101:

First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. . . . If so, we then ask, what else is there in the claims before us? . . . To answer that question, we 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. . . . We have 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.

*Id.* at 2355 (internal quotation marks, brackets, citations, and footnote omitted). We apply this two-part *Mayo/Alice*

test to determine whether the '610 application claims patent-eligible subject matter.

#### A. The '610 Application

The '610 application discloses “a hindsight allocation instrument (‘HALO’)” that includes “a tracking set of financial instruments with the price, final value, or final valuation of the HALO being governed, set, or determined by a subset or subgroup of that tracking set as determined by . . . an allocation formula included in the HALO.” '610 application p. 1 ¶ 7. “The HALO’s tracking set includes any group of two or more underlying financial instrument[s].” *Id.* p. 2 ¶ 9. “A financial instrument is any instrument that has monetary value or records a monetary transaction,” such as “a stock, bond, mortgage, currency, . . . or any other asset, basket of assets, liability, tradable item, or saleable item.” *Id.* p. 2 ¶ 10.

“At expiration, the final valuation of the HALO is determined by the tracking set subgroup and / or the allocation formula. In one embodiment, the final valuation is based on the price, yield, or total return of instruments in the tracking set subgroup.” *Id.* p. 3 ¶ 14. “The allocating formula is structured to select any subgroup from the tracking set,” *id.* p. 3 ¶ 15, and “weighs the financial instruments in the tracking set subgroup either differently or the same in determining the final valuation,” *id.* p. 3 ¶ 16. “The price data [a] HALO[] generate[s], by itself, may be disseminated as, e.g., price quotations, via electronic, Internet, or computer networks, or other means.” *Id.* p. 7 ¶ 26.

The '610 application discloses that the HALO can be structured to allow for trading “on an organized securities exchange,” “on an organized commodities or futures exchange,” or “in the ‘over the counter’ market.” *Id.* p. 3 ¶ 13. This structuring allows for the HALO to be traded “via electronic communications networks, . . . the Internet, . . . e-mail, . . . phone, . . . or through any other viable

communications device.” *Id.* p. 5 ¶ 23. “In certain embodiments, the HALO is cleared by an organization designated as a clearing entity by an agency of the United States government or any other sovereign government or any other clearing entity.” *Id.* p. 5 ¶ 24.

Mr. Chorna identifies independent claims 1 and 16 as representative. Appellant’s Br 2. Independent claim 1 recites:

A hindsight financial instrument comprising a tracking set of two or more financial instruments that determines a final valuation from a tracking set subgroup selected from the tracking set, the tracking set subgroup comprising no more than less of the financial instruments in the tracking set.

’610 application p. 9 cl. 1. Independent claim 16 recites:

A hindsight financial instrument traded on at least one of an organized securities exchange, commodities exchange, exempt board of trade, alternative trading system, voice brokerage system, and “over the counter” system comprising a tracking set of two or more financial instruments that determines a final valuation from a tracking set subgroup selected from the tracking set, the tracking set subgroup comprising no more than less of the financial instruments in the tracking set.

*Id.* p. 10 cl. 16.

#### B. The ’610 Application Is Directed to an Abstract Idea

“The Supreme Court has not established a definitive rule to determine what constitutes an ‘abstract idea’ sufficient to satisfy the first step of the *Mayo/Alice* inquiry.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Rather, it is “sufficient to compare claims at issue to those claims already found to be di-

rected to an abstract idea in previous cases.” *Id.* The instant case involves contractual relations, thus “[t]he relevant Supreme Court cases are those which find an abstract idea in certain arrangements involving contractual relations, which are intangible entities.” *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353 (Fed. Cir. 2014) (citations omitted). In finding certain challenged claims to be directed to patent-ineligible subject matter, the Supreme Court in both *Bilski* and *Alice* “relied on the fact that the contractual relations at issue constituted a fundamental economic practice long prevalent in our system of commerce.” *Id.* at 1354 (internal quotation marks and citations omitted).

Mr. Chorna asserts the PTAB erred in finding that the ’610 application claims “are directed to a patent-ineligible concept.” Appellant’s Br. 5. Mr. Chorna’s arguments are directed to the second step of the patent eligibility test articulated in *Mayo/Alice*. *See id.* at 5 (asserting the ’610 application recites additional process steps that are meaningful limitations that “add ‘significantly more’ to the abstract portion of the claimed invention”), 6 (asserting the “process limitations for defining a tracking set and determining the value of the [HALO] based on a criteria of a subgroup within the tracking set using a specifically designed allocation formula are ‘inventive concepts,’ . . . and provide the ‘significantly more’ required by legal precedent to ‘transform the nature of the claim’ into a patent eligible application.”). Because we conduct our review *de novo*, despite Mr. Chorna’s focus on step two, we begin with step one of the test.

In the present case, Mr. Chorna seeks patent protection for prospective evaluation of the market (over some specified period of time), and the invention’s goal is to help investors *automatically* choose the best performing index/financial instrument over that period. These are the very same economic practices that were deemed to be patent-ineligible subject matter in *Bilski* and *Alice*. *See*

*Bilski*, 561 U.S. at 609–10; *Alice*, 134 S. Ct. at 2357. Mr. Chorna’s claims are directed to financial instruments that are designed to protect against the risk of investing in financial instruments. See ’610 application p. 9 cl. 1 (describing maximizing financial return while minimizing risk of financial loss), *id.* pp. 9–11 cls. 9, 16, 18, 25 (describing the various methods of calculating the risk via mathematical formula), *id.* p. 10 cl. 17 (describing transactions between market participants and the commodity provider); see also Appellant’s Br. 1–2 (“This invention relates to a financial instrument that allows investors to initiate positions in various tracking sets of financial instruments,” which effectively allows investors to maximize financial return while minimizing their risk of price fluctuation.). These types of “commercial transactions do[] not make the idea non-abstract for section 101 purposes.” *buySAFE*, 765 F.3d at 1355. Indeed, in hedging transactions, the Supreme Court has held that “[h]edging is a fundamental economic practice long prevalent in our system of commerce” and that “[t]he concept of hedging, described in [the asserted claim] and reduced to a mathematical formula in [dependent claims], is an unpatentable abstract idea . . . .” *Bilski*, 561 U.S. at 611–12 (internal quotation marks and citation omitted).

The asserted claims also are directed to the abstract idea of “intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk [also known as a clearing house].” *Alice*, 134 S. Ct. at 2356; see ’610 application p. 10 cl. 12 (“The hindsight financial instrument of claim 1 cleared by an organization designated as a clearing entity by an agency of at least one of the United States government, another sovereign government, and other clearing entity.”). Essentially, claim 12 “involve[s] a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk.” *Alice*, 134 S. Ct. at 2356. This transac-

tion is “an abstract idea beyond the scope of § 101.” *Id.* (internal quotation marks omitted).

This court’s case law therefore supports the PTAB’s conclusion that, under the *Mayo/Alice* step one analysis, claims 1–25 of the ’610 application “are drawn to the abstract idea of a financial instrument, which, at its source, is an agreement—a meeting of the minds, between the parties each having an interest in monetary value being traded, thus encompassing an abstract concept.” J.A. 5. Thus, we find the PTAB did not err in its conclusion that the claims of the ’610 application are drawn to an abstract idea.

### C. The ’610 Application Does Not Recite an Inventive Concept

Because the claims of the ’610 application are directed to an abstract idea, the second step of the *Mayo/Alice* analysis requires us to consider whether these claims—when viewed individually and as an ordered combination—contain “an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S. Ct. at 2357 (internal quotation marks and citation omitted). A patent contains an inventive concept if it “include[s] additional features” that are “more than well-understood, routine, conventional activities.” *Id.* at 2357–59 (internal quotation marks, brackets, and citations omitted).

In its analysis under the second step of *Mayo/Alice*, the PTAB found there was no inventive concept that transformed the claimed invention into patent-eligible subject matter. J.A. 5. The PTAB determined “the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea on a generic computer.” J.A. 5–6 (brackets omitted) (quoting *Alice*, 134 S. Ct. at 2359). In answering this question, the PTAB reasoned “the method claims do not, for example, purport to improve the functioning of



any other technology or technical field. Instead, the claims at issue amount to nothing significantly more than the terms of a contract.” J.A. 6. Thus, the PTAB concluded that the ’610 application did not possess “enough to transform an abstract idea into a patent-eligible invention.” J.A. 6 (citing *Alice*, 134 S. Ct. at 2360).

Mr. Chorna argues the PTAB erred in finding that the ’610 application lacks an inventive concept. Appellant’s Br. 7. Mr. Chorna asserts that “the claims, when taken as a whole, do not simply describe a mere agreement, but instead combine the inventive concept of utilizing a subset of a tracking set to generate a final valuation of a created financial instrument that is cleared by a third party.” *Id.*

We find the claims fail to recite any elements that, when viewed individually or as an ordered combination, transform the abstract idea of a financial instrument to reduce the risk of investing into a patent-eligible application of that idea. The PTAB correctly determined that the claims of the ’610 application do not contain a specific or limiting recitation of improved computer technology. *See* J.A. 5–6. Taking the claim elements separately, the claims invoke the use of an “organized securities exchange, commodities exchange, alternative trading system, and ‘over the counter’ system.” ’610 application p. 10 cl. 11; *see also id.* p. 5 ¶ 23 (The specification discusses the use of “electronic communications networks, . . . the Internet, . . . e-mail, instant messaging, phone, [etc.]” to facilitate trading HALOs.). However, “[s]imply appending conventional steps, specified at a high level of generality,” and “attempting to limit the use of [the idea] to a particular technological environment” is insufficient to supply an inventive concept. *buySAFE*, 765 F.3d at 1354 (internal quotation marks and citations omitted). “[T]he use of a computer to . . . issue automated instructions . . . [is a] well-understood, routine, conventional activit[y] previously known to the industry.” *Alice*, 134 S. Ct. at 2359 (internal quotation marks, brackets, and citations omitted).

“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.” *buySAFE*, 765 F.3d at 1355. Viewing the claims as an ordered combination, the claimed financial securities, allocation formulas, trading networks, and clearing houses do not add anything to the steps described above. *See Alice*, 134 S. Ct. at 2359–60.

Finally, Mr. Chorna relies on *Diamond v. Diehr* to support his assertion that the ’610 application contains claims that are not directed to “a formula in isolation, but rather that the steps impose meaningful limits that apply the formula to improve an existing technological process [i.e., buying and selling financial instruments via computers and communication networks] . . . [by] selecting the best performing financial instruments within a tracking set of financial instruments.” Appellant’s Br. 7 (relying on *Diamond v. Diehr*, 450 U.S. 175, 188 (1981)). Mr. Chorna contends his allocation formula, when applied using a computer provides “the HALO financial instrument . . . the flexibility to be valued based on a value of one or more financial instruments within the tracking set, rather than on a single asset.” *Id.*

We do not agree with Mr. Chorna. We have previously stated that “we must read *Diehr* in light of *Alice*, which emphasized that *Diehr* does not stand for the general proposition that a claim implemented on a computer elevates an otherwise ineligible claim into a patent-eligible improvement.” *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1364 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2358). This court noted that “*Diehr* involved a well-known mathematical equation . . . used in a process designed to solve a technological problem in conventional industry practice.” *Id.* (internal quotation marks and citations omitted). However, application of *Diehr* to the claims in *Alice*, “which were directed to implementing the abstract idea of intermediated settlement on a generic computer,” did not make these claims patent-eligible

subject matter. *Id.* (internal quotation marks, brackets, and citation omitted). In this case, we find the '610 application—the claims of which are directed at financial instruments that are valued using an allocation formula and are traded and cleared through conventional processes—does not recite patent-eligible subject matter.

#### CONCLUSION

We have considered Mr. Chorna's remaining arguments and find them unpersuasive. Accordingly, the decision of the United States Patent and Trademark Office's Patent Trial and Appeal Board is

#### **AFFIRMED**

#### COSTS

Each party shall bear its own costs.