No. 23-

IN THE

Supreme Court of the United States

FICEP CORPORATION,

Petitioner,

v.

PEDDINGHAUS CORPORATION,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

MATTHEW B. LOWRIE
Counsel of Record
KEVIN M. LITTMAN
FOLEY & LARDNER LLP
111 Huntington Avenue, Suite 2500
Boston, MA 02199
(617) 342-4006
mlowrie@foley.com

Counsel for Petitioner

326978

COUNSEL PRESS
(800) 274-3321 • (800) 359-6859

QUESTIONS PRESENTED

Ficep invented and claimed a method of manufacturing components (like steel beams) of a larger structure (like the skeleton of a building). The claims specifically recite a method of manufacturing the component and a manufacturing line for doing so.

That the invention was an important real-world manufacturing innovation was, as a factual matter, thoroughly established. The improvement was touted as enabling vastly more efficient and superior manufacture of components – not just by Petitioner's experts, but also in the defendant's advertising. There was industry recognition applauding the "innovation." There was copying by competitors. There was successful litigation and licensing. And there was specific customer demand for the improvement to the manufacturing process. That is, every objective indicium of inventiveness that this Court has identified was present in the technological, traditionally patent-eligible, setting of manufacturing lines.

The Federal Circuit nevertheless invalidated the patent claims as "abstract" and refused to consider evidence of inventiveness. This petition therefore addresses the following questions:

1. Does a claim directed to patent-eligible subject matter (here, manufacturing) nevertheless become ineligible as "abstract" if the process is improved using automation?

a. Should an "abstract-idea" behind a claim to a patent-eligible process be identified and, if so, how and at what level of abstraction?

2. What is the appropriate standard for determining whether a claim is "inventive," conferring eligibility under *Alice* Step 2, including whether objective evidence of inventiveness and technological improvement is relevant?

3. Is either what a claim is "directed to" and whether that is abstract, or whether a claim is "inventive" as articulated in *Alice* step 2, only for a judge to decide as a legal matter or does it include fact issues and, if the latter, are they for a jury?

PARTIES TO THE PROCEEDING

Petitioner is Ficep Corporation.

Respondent is Peddinghaus Corporation.

CORPORATE DISCLOSURE STATEMENT

Pursuant to this Court's Rule 29.6, petitioner Ficep Corporation states that its parent, Ficep S.p.A., an Italian company, owns 10% or more of its stock.

RELATED PROCEEDINGS

The following Proceedings are directly related to this case within the meaning of this Court's Rule 14.1(b)(iii):

Ficep Corporation v. Peddinghaus Corporation, Case No. 1:19-cv-01994-RGA (D. Del.), judgment entered on February 28, 2022.

Ficep Corporation v. Peddinghaus Corporation, Case No. 2022-1590 (Fed. Cir.), judgment entered on August 21, 2023.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner Ficep Corporation ("Ficep" or "Petitioner") respectfully submits this petition for a writ of certiorari to review the judgment of the U.S. Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The court of appeals' opinion in *Ficep Corp. v. Peddinghaus Corp.*, Case No. 2022-1590 (Fed. Cir. Aug. 21, 2023) (App. 1a-18a) is not published in the Federal Reporter but is reprinted at 2023 WL 5346043. The court of appeals' order denying panel rehearing *en banc* is unreported but is reproduced at App. 70a-71a. The opinion of the district court granting Peddinghaus Corporation's ("Peddinghaus") motion for summary judgment is *Ficep Corp. v. Peddinghaus Corp.*, 587 F. Supp. 3d 115 (D. Del. 2022) (App. 19a-40a). The opinion of the magistrate judge recommending denial of Peddinghaus's motion to dismiss on the same issue is at Case No. 19-1994-RGA, 2021 WL 254104 (D. Del. Jan. 26, 2021) (App. 44a-69a). The opinion of the district court accepting the recommendation and denying the motion to dismiss is at Case No. 19-1994-RGA, 2021 WL 979564 (D. Del. Mar. 16, 2021) (App. 41a-43a).

JURISDICTION

The Federal Circuit entered judgment on August 21, 2023. Ficep filed a petition for rehearing *en banc*, which the court denied on October 23, 2023 (App. 70a-71a). This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

Section 101 of Title 35 of the U.S. Code provides: "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 requirements of this title."

Section 112(b) of Title 35 of the U.S. Code provides: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention."

Section 103 of Title 35 of the U.S. Code provides: "A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made."

PRELIMINARY STATEMENT

In *Alice,* this Court declined "to delimit the precise contours of the 'abstract ideas' category." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 221 (2014). In the ensuing ten years, the ability to secure patents in the "useful arts" has not just eroded but become a panel-dependent game of chance.

Historically, and under all of this Court's precedent, patents "directed to" patent-eligible processes like manufacturing remain patent-eligible whether improved through an abstract idea or otherwise. This is reflected in *Diehr* holding patent-eligible an improvement to a conventional rubber curing process, with the change consisting of opening the press when the Arrhenius equation indicates to do so.

Recent Supreme Court jurisprudence did not change this, as confirmed by this Court's citing *Diehr* with approval, while cautioning that Section 101 does not preclude patenting an invention "designed to solve a technological problem in 'conventional industry practice'." *Alice*, 573 U.S. at 223 (quoting *Diamond v. Diehr*, 450 U.S. 175, 177, 178 (1981)).

Federal Circuit precedent has diverged from this Court's guidance. The Federal Circuit (or at least some of its panels) searches for some underlying essence of the invention, whether or not "designed to solve a technological problem in conventional industry practice," seeks to characterize that essence at some level of abstraction, and then decides whether that level of abstraction is too high to be patent-eligible.

This cannot be the law. The purpose of the Patent Act is to promote science by encouraging disclosure. Consider a manufacturing process that was improved using a concept, equation, algorithm or some other abstract idea, and the result was avoiding hazardous, catastrophic failures at manufacturing plants. The Federal Circuit would rule that ineligible for patent protection, because the improvement to the statutory process could be characterized as an abstract idea. And the improvement would instead be held as a trade secret, outside of the public eye.

Moreover, the Federal Circuit's process of abstracting every claim has been widely recognized as creating uncertainty and providing seemingly arbitrary results.

Business method patents raise "special problems" as this Court observed in *Bilski*. *Bilski v. Kappos*, 561 U.S. 593, 608 (2010). It has been ten years since *Alice* addressed the abstract-idea exception to eligibility for business methods, and decades since the abstract-idea exception has been addressed by this Court outside of that context.

Eligibility of patents directed to improving statutory processes, like manufacturing, needs further Supreme Court guidance. It is time for this Court to better "delimit the precise contours of the 'abstract ideas' category." *Alice*, 573 U.S. at 221.

STATEMENT OF THE CASE

I. PATENT ELIGIBILITY

A. Statutory Requirements of Eligibility (Section 101) and the Patent Claims Define the "Invention"

Congress specifically set forth what subject matter can be patented in the first section of the 1952 Patent Act:

> 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 requirements of this title.

The "conditions and requirements" for a patent include statutory sections defining what is new (Section 102), what is inventive (Section 103) and whether the patent teaches enough to justify or "enable" the full breadth of a claimed invention (Section 112(a)).

Section 101 is understood to define what types of things may be patented, specifically any "process, machine, manufacture, or composition of matter" and any "improvement thereof." 35 U.S.C. § 101. The plain statutory language was intended to be broad, i.e., "anything under the sun made by man" was intended to be patent-eligible, subject to the other requirements of the 1952 Patent Act. S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting legislative history).

At least since the Patent Act of 1870, the "invention" to be tested for infringement and validity is not some abstract notion or "essence" articulated in a patent document – it is the patent claim(s). *Hilton Davis Chemical Co. v. Warner- Jenkinson Co., Inc.*, 62 F.3d 1512, 1526 (Fed. Cir. 1995) ("The claiming requirement ... was contained in the Patent Act of 1870."), subsequent proceedings, *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997); Patent Act of 1870, ch. 230, § 26, 16 Stat. 198–217 ("particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery").

As stated by the late Giles Sutherland Rich, a member of the two-person committee that drafted the 1952 Patent Act, "the name of the game is the claim." Giles S. Rich,

The Extent of the Protection and Interpretation of Claims–American Perspectives, 21 Int'l Rev. Indus. Prop. & Copyright L. 497, 499, 501 (1990).

B. Supreme Court "Exceptions" to Patent Eligibility and, Particularly, the Abstract-Idea Exception

This Court has identified three "exceptions" to eligibility of a patent claim, exceptions which "are not required by the statutory text" – "laws of nature, physical phenomena, and abstract ideas." *Bilski*, 561 U.S. at 601. (One might question whether these are truly "exceptions," as none are "made by man.")

Any physical patent claim will involve a "law of nature." It is the laws of nature and physics that provide for gravity and that allow one object to sit on top of another. Such uses of laws of nature, of course, underlie every patent claim and have never been invoked to deny eligibility. It is a different matter if the claim itself invokes a law of nature.

When a "law[] of nature" is involved *in a patent claim*, the natural law is generally easy to identify – though the relationship to the patent claim and eligibility may be more nuanced. Recent examples include *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72 (2012) (relationship between identified metabolites and dosage of drug) and *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013) (isolated natural DNA ineligible; synthesized cDNA eligible because it is man-made).

Originally, the abstract-idea exception also concerned easy to identify concepts, i.e., patent claims reciting algorithms or mathematical equations. For decades, the leading Supreme Court precedents on what constituted an "abstract idea" were *Benson, Flook* and *Diehr*.

Benson's patent claim consisted of an algorithm for converting one form of binary code (binary coded decimal) to another (straight binary encoding), and no more.[1] There was no change in the real world, the claims were entirely computational/theoretical, and the claims were ineligible. *Benson*, 409 U.S. at 71.

---

1. The claims in *Benson* are included in an Appendix to the Supreme Court opinion. Claim 8 reads:

> The method of converting signals from binary coded decimal form into binary which comprises the steps of-
>
> (1) storing the binary coded decimal signals in a reentrant shift register,
>
> (2) shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,
>
> (3) masking out said binary '1' in said second position of said register,
>
> (4) adding a binary '1' to the first position of said register,
>
> (5) shifting the signals to the left by two positions,
>
> (6) adding a '1' to said first position, and
>
> (7) shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register.

Gottschalk v. Benson, 409 U.S. 63, 73-74 (1972).

Flook similarly claimed calculating (or "adjusting") a number using a recited equation – ***and no more***.[2] *Flook*, 437 U.S. at 594-95. The claim limitations were "directed" only to a calculation, and not even an automated one.

Diehr was directed to (no more than) using the known Arrhenius equation to determine when to *automatically* open a press when curing rubber.[3] That the alleged

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2. The *Flook* claim (emphasis added):

> ***A method for updating the value of at least one alarm limit*** … which comprises:
>
> …[performing identified calculations]…
>
> determining an updated alarm limit which is defined as B1 + K; and thereafter
>
> adjusting said alarm limit to said updated alarm limit value.

Parker v. Flook, 437 U.S. 584, 596-97 (1978).

3. The *Diehr* claim (emphasis added):

> ***A method of operating a rubber-molding press*** for precision molded compounds with the aid of a digital computer, comprising:
>
> providing said computer with a data base …,
>
> repetitively calculating in the computer, at frequent intervals during each cure, ***the Arrhenius equation*** …,
>
> repetitively comparing … each said calculation… and said elapsed time, and
>
> opening the press automatically when a said comparison indicates equivalence.

Diehr, 450 U.S. at 179 n.5.

abstract idea was an equation was again easy to identify. The claim recited "the Arrhenius equation."

Because the claim (and its limitations) was for a "method of operating a rubber-molding press," however, it was statutory. *Diehr*, 450 U.S. at 191-93. Automating part of a statutory manufacturing process (opening the press) using an abstract idea (mathematical Arrhenius equation) did not remove the process from eligibility.

Thus, under this Court's precedent, where the "abstract idea" involves automation of eligible matter using abstract ideas, the context *in the patent claim* determined eligibility. If the *claimed* subject matter is statutory, as curing rubber plainly is, the claim is eligible and patentable (to the extent provided in the remainder of the Patent Act, e.g., it must be inventive), even if it invokes automation or an abstract idea such as the Arrhenius equation. Merely performing a calculation like the Arrhenius equation is not statutory nor is it "under the sun made by man." Curing rubber, whether or not improved using an abstract idea, is statutory subject matter "made by man."

Unlike abstract ideas in the form of mathematical algorithms and equations, some business method patents pose unique problems in assessing eligibility. *Bilski*, 561 U.S. at 608 ("some business method patents raise special problems"); *see also Alice*, 573 U.S. 208.

Those cases address claims that are fully outside what was contemplated as a statutory process, product or machine when the 1952 Act was adopted. Those cases do not involve industrial technology or improvements to it.

In *Bilski*, the opinion begins with the claim limitations, specifically "initiating transactions," "identifying market participants" and "initiating [other] transactions."[4] On the face of it, none are "directed to" statutory subject matter. The *Bilski* opinion concludes that the claim is "directed to" hedging risk, the claim limitations involve nothing more, and the claim was therefore ineligible. *Bilski*, 561 U.S. at 611.

Alice involved a claim to a "method of exchanging obligations as between parties" that consisted entirely of manipulating information. *Alice*, 573 U.S. at 213 n.2. The opinion again begins with identification of the claim limitations – "creating 'shadow' credit and debit credit records (i.e., account ledgers)" and "updat[ing] the shadow records." *Id.* at 213. Again, the 1952 Act plainly

---

4. From the first page of the Supreme Court opinion:

> Claim 1 consists of the following steps:
>
> > "(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;
> >
> > "(b) identifying market participants for said commodity having a counter-risk position to said consumers; and
> >
> > "(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions."

Bilski, 561 U.S. at 599.

did not contemplate the business method of "exchanging obligations" or "updating… records" as among the enumerated classes of patentable subject matter.

Thus, under *Alice* step one, the claim was held to be directed to nonstatutory subject matter. *Id.* at 219-21. "[U]pdating" records is no different than *Flook*'s claim for "adjusting" a limit or *Benson*'s claim to converting data format. The claim limitations were outside the technology or "useful arts" contemplated in the Patent Act and U.S. Constitution.

The patents in *Alice*, however, also included claims to automated systems for performing the nonstatutory method. *Id.* at 214. One might call a programmed computer for performing a nonstatutory method a Section 101 "machine." Again, business method patents raised "special problems."

Thus, in *Alice*, the Court ruled that automation (without more) did not ***save*** what would be an ineligible (business method) process from ineligibility. *Id.* at 226-27. As discussed below, this is very different than holding (as the Federal Circuit did in this case) that an *eligible* process is *converted* to being ineligible, if part of the process is automated or otherwise improved with an abstract idea.

To the contrary, *Diehr* held that a statutory rubber curing process remained statutory when part is automated with an abstract idea, and *Alice* expressly was not intended to alter the patent-eligible nature of historically eligible processes like manufacturing. *Id* at 223 (Section 101 does not preclude patenting an invention "designed to solve a technological problem in 'conventional industry practice'") (quoting *Diehr*, 450 U.S. at 177).

Even for a nonstatutory process like the business method claims in *Alice*, technological inventions may occur and be eligible. Thus, under *Alice* step two, the claim is examined to see if the claim is limited to an eligible technological improvement. Under the facts of *Alice*, there was nothing alleged to be inventive outside of the nonstatutory concept – no real-world impact or improvement to technology, of the type contemplated by the authors of the 1952 Patent Act. And so the claims were held to be ineligible. *Id.* at 225-26.

C. Adoption of a "Nature of the Invention" Test, and Abstracting Statutory Claims, by Some Federal Circuit Panels

Under *Diehr* and as described above, conventionally patentable technological processes like manufacturing remained patentable even if improved by an abstract idea. Under *Alice*, a nonconventional business method patent was examined for patentability and found to be "directed to" an overall ineligible process (of exchanging business obligations) and automation did not save it.

The Federal Circuit has turned that "directed to" language against what had been statutory processes and applied a test where an ill-defined level of abstraction of whatever is determined to be the underlying nature or essence of a patent claim is identified and tested for abstractness. Thus, a claim "directed to" to a statutory process (or in the words of *Alice*, "a technological problem in 'conventional industry practice'") becomes nonstatutory if improved by what might be characterized as an abstract idea. *E.g.*, *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC,* 967 F.3d 1285, 1298 (Fed. Cir. 2020) ("*Am. Axle*

1") (improvement to dampen vibration in vehicle shaft ineligible because based on Hooke's law); *Interactive Wearables, LLC v. Polar Electro OY*, 501 F. Supp. 3d 162, 174 (E.D.N.Y. 2020) (media (e.g., music or video) player reduced to ineligible abstract idea of "providing information in conjunction with media content"), *aff'd without opinion*, No. 2021-1491, 2021 WL 4783803 (Fed. Cir. Oct. 14, 2021).

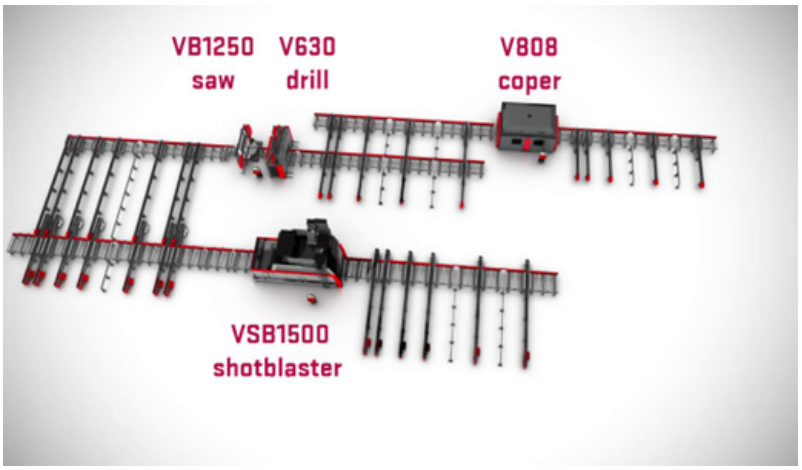
II. U.S. Patent No. 7,974,719

U.S. Patent No. 7,974,719 ("the '719 patent") is directed to manufacturing structural steel. Ficep's fabrication systems practice the invention (C.A. App. 837-38 (Colombo Decl., ¶¶4-5)); Voortman's fabrication lines were found to infringe in an earlier proceeding (C.A. App. 1564-1570 (Memo. and Order re: Summary Judgment in *Ficep Corp. v. Voortman USA Corp.*, Case No. MJG-13-429 (D. Md. Feb. 6, 2017)); Peddinghaus's accused systems are for making structural steel (*e.g.,* C.A. App. 798-813 (Peddinghaus brochure); 39 (Complaint, ¶16); 52-56 (Complaint, ¶35); and the only discussion in the record of any "conventional" practice was manufacturing structural steel (*see, e.g.*, C.A. App. 781-782 (Chipman Decl., ¶16); 838-839 (Colombo Decl., ¶¶6-8); 819 (Faulkner Article Faulkner, L., "Automating Layout in Steel Fabrication," Modern Steel Construction, Nov. 2011 ("Faulkner Article")); 504-505 (Ficep's Opp. to Peddinghaus' Mot. for Summary Judgment); 802 (Peddinghaus brochure); App. 3a, 32a (citing D.I. 54, ¶24); 34a; 37a-37a).

Three-dimensional computer aided design ("CAD") is used. C.A. App. 23 ('719 patent at 1:20-25). E.g.:

C.A. App. 290.

The individual components (e.g., I-beams) of the structure (e.g., a building) are produced on massive manufacturing lines, e.g.:



C.A. App. 287.

Steel enters the line at the bottom-right, is automatically moved to the shot blaster which cleans the surface, then (automatically) from the lower to the upper track where the saw cuts the beam to length, and then to a drill. The coper then etches lines ("scribes") onto the part.

Conventionally, scribing only placed an identification code on the beam. Voortman's change to the line infringed, specifically, using a coper and controls to scribe the shape of an intersecting beam onto a beam being manufactured. C.A. App. 1569-1570 (Memo. and Order re: Summary Judgment in *Ficep Corp. v. Voortman USA Corp.*, Case No. MJG-13-429 (D. Md. Feb. 6, 2017)).

The '719 patent first notes that some component parameters were included in CAD design models, like "dimensional references," *but* they were not used to automatically control machines. C.A. App. 23 ('719 patent at 1:20-25). Rather, they were input by hand. *Id.* at 1:37-43.

The patent then separately identifies two things the invention addresses.

The first is the above issue – automating use of design parameters like length that were in conventional CAD models. *Id.* at 1:43-49. That was not inventive, and automated use of dimensions was not new.

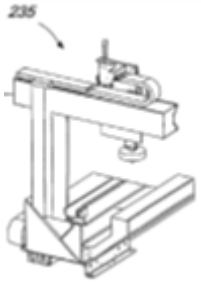
The second addresses something ***not*** in prior art CAD files – intersection parameters. C.A. App. 779-783 & 787 (Chipman Decl., ¶13, ¶¶16-17, & ¶24); 838-842 (Colombo Decl., ¶¶5-13); C.A. App. 23I ('719 patent at 1:49-55). Intersection parameters were not there to be read. C.A. App. 781 (Chipman Decl., ¶16); 838-840 (Colombo Decl.,

¶¶6-9). And there was no coper or other machine capable of receiving and using ***the definition of an intersection*** anyway. C.A. App. 787 (Chipman Decl., ¶24).

Thus it was identification and use of intersection parameters in manufacturing a component that led to the grant of the '719 patent. C.A. App. 1254-1262. And when Peddinghaus petitioned for *Inter Partes* Review, the petition was denied because the prior art again did not show identification and use of intersection parameters by manufacturing machines. C.A. App. 725-732.

An example in the patent of use of intersection parameters is to scribe lines onto steel to indicate where one steel beam "intersects" another. *See, e.g.*, C.A. App. 20 ('719 patent at Abstract) ("instructing a manufacturing machine to ***mark out*** the position of the components ….") (emphasis added); C.A. App. 23 ('719 patent at 1:55-58) ("***marking-out*** operations").

The '719 patent shows a scribing tool to do so (C.A. App. 22 ('719 patent, FIG. 2)):



Scribing tools (like FIG. 2) are large industrial machines:

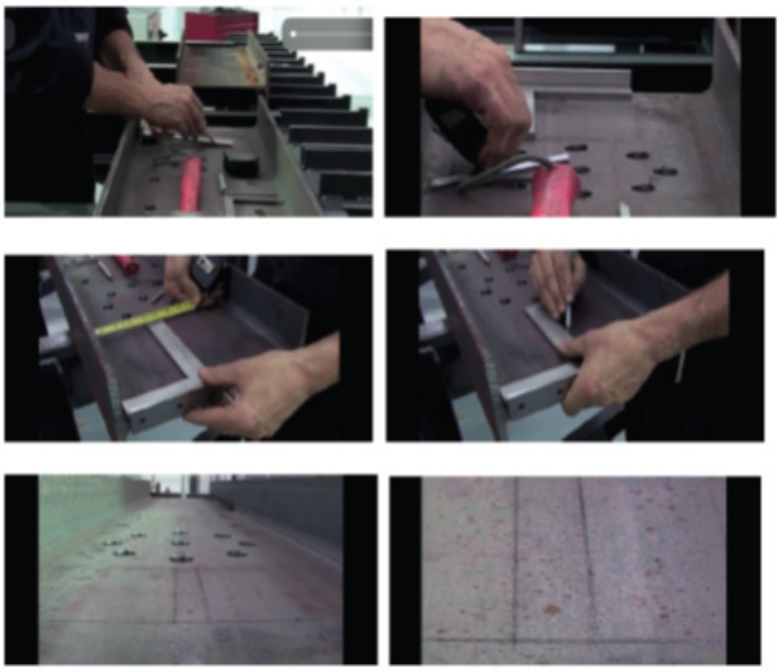
C.A. App. 801.

C.A. App. 837 (Colombo Decl., ¶4).

Examples of scribed intersections are:

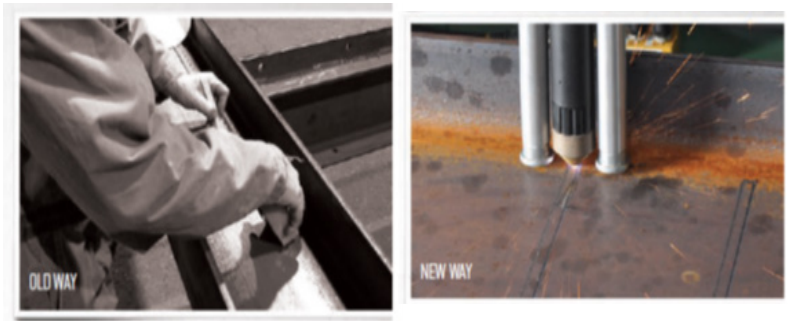
C.A. App. 294; 821. Both show the cross section of an intersecting I-beam scribed onto a part.

Intersection parameters did not exist in CAD files before Ficep's invention. C.A. App. 781 (Chipman Decl., ¶16); 838-840 (Colombo Decl., ¶¶6-9). So one had to take the component off the manufacturing line to mark it at separate layout stations. C.A. App. 838-839 (Colombo Decl., ¶¶6-8); 781-782 (Chipman Decl., ¶¶16-17). A skilled engineer would take a (2-dimensional) print-out and try to figure out what parts intersected, where and how. C.A. App. 838-839 (Colombo Decl., ¶¶6-8); 781 (Chipman Decl., ¶16). Using a ruler and a soapstone/marker, a person could then mark an intersection (C.A. App. 839 (Colombo Decl., ¶8); 781 (Chipman Decl., ¶16)), e.g.:



C.A. App. 839 (Colombo Decl., ¶8); 846-863; 819 (Faulkner Article).

Peddinghaus summed up the change in a brochure touting the very process that infringes Ficep's patent. The brochure shows the "old way" (by hand, off-the-line, with a ruler) and the "new way" (automated by a scriber on the line):



C.A. App. 802 (Peddinghaus brochure); *see also id.* at 781 n.1 (Chipman Decl.).

Peddinghaus's brochure explains the tremendous advantages (C.A. App. 802):

And the benefits are not limited to manufacturing. The piece coming off the line is better than possible conventionally, allowing better and more reliable construction. C.A. App. 842 (Colombo Decl., ¶13); 786-787 (Chipman Decl., ¶21).

Thus, there was substantial, unrebutted proof of inventiveness. Ficep's technical expert and a named inventor both explained how the '719 patent contains a concrete inventive concept. They described how the process in the patent was not well known, routine or conventional, and was a concrete improvement to manufacturing technology. C.A. App. 787-789 (Chipman Decl., ¶¶23-26); 841-842 (Colombo Decl., ¶¶11-13).

Virtually every objective indicium of inventiveness was proved: industry recognition (including an article specifically lauding the invention), copying by competitors (including Voortman and Peddinghaus), commercial success (including demand for the patented feature), and litigation and licensing success. C.A. App. 787-792 (Chipman Decl., ¶¶24-30); 842 (Colombo Decl., ¶¶13-15); 819-822 (Faulkner Article); 179-180 (Consent Final Judgment in *Ficep Corp. v. Voortman USA Corp.*, No. MJG-13-429 (D. Md. Apr. 24, 2018)).

Claim 7 of the '719 patent recites:

> An apparatus for automatic manufacture of an object, comprising:
>
> a computing device adapted to create a design model of an object having multiple individual components, at least two of the individual

components defining an intersection at which the two components are in contact with one another;

at least one programmable logic controller in communication with the computing device and with at least one manufacturing machine;

a receiver associated with the programmable logic controller for receiving the design model of the object;

a database unit adapted to store the design model received at the receiver;

a processor which is associated with the programmable logic controller and extracts from the design model a plurality of dimensions of components which define a plurality of components of the object;

wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components;

wherein the processor extracts from the design model the intersection parameters;

a transmitter associated with the processor for transmitting the intersection and machining parameters and the component dimensions from the programmable logic controller to the at least one manufacturing machine; and

> wherein the at least one manufacturing machine manufactures the components based at least in part on the transmitted component dimensions and on the transmitted intersection and manufacturing parameters.

C.A. App. 26 ('719 patent, claim 1).

The claims are directed to a manufacturing line ("at least one manufacturing machine" for "manufactur[ing] the components") (claim 7) and a corresponding process for manufacture requiring actual manufacture of a component (claim 1).

III. Federal Circuit Decision

In an earlier unrelated case, a petition for rehearing *en banc* on a Section 101 invalidation as an "abstract idea" failed when in it split the Federal Circuit 6-6. *Am. Axle & Mfg. Inc.* v. *Neapco Holdings LLC*, 966 F.3d 1347 (Fed. Cir. 2020) ("*Am. Axle 2*"). There is an ideological split within the Federal Circuit. Over the last three years, not one of the six judges voting to deny *en banc* review has authored an opinion finding eligibility under Section 101.[5]

Unfortunately for Ficep, the panel for this case consisted of three Judges who voted "no." The Federal Circuit affirmed summary judgment of patent invalidity under Section 101. App. 1a-18a.

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5. The only such decision the undersigned is aware of, since denial of rehearing, is *TecSEC, Inc. v. Adobe Inc.*, 978 F.3d 1278 (Fed. Cir. 2020), was over three years ago and very likely briefed and argued before *American Axle*.

For *Alice* step one, the Federal Circuit ruled as a matter of law that the claims are "directed to the patent-ineligible abstract idea of extracting and transferring information from a design file to a manufacturing machine." App. 8a. There was no discussion as to why this level of abstraction, as opposed to one that incorporates the type of manufacturing data (intersection parameters) or that the claimed process requires (what was proved to be) a previously nonexistent manufacturing machine. Rather, the Federal Circuit said that the inquiry was "the focus of the claimed advance," i.e., the essence of the invention, and by implication, not to what was being improved (manufacturing). *Id.*

This Court's holding in *Diehr* would seem to provide a hard barrier to Federal Circuit's ruling. The "essence" of the invention in *Diehr* was using the Arrhenius equation (abstract) to automate (unhelpful according to the Federal Circuit) a step in a conventional process for curing rubber. *Diehr*, 450 U.S. at 177-79.

The Federal Circuit (improperly) disposed of *Diehr* by purporting to distinguish it as pre-*Alice* (apparently questioning whether *Diehr* remains good law) and as showing a specific technical process (that was conventional, other than its improvement through use of the Arrhenius equation to automatically open the press). App. 13a-14a.

This Court in *Alice* observed that the touchstone of ineligibility is whether a claim preempts an abstract idea, *Alice*, 573 U.S. at 217. Here, the Federal Circuit also left unaddressed whether the claims could even remotely preempt its identified idea – plainly the claims do not preempt "extracting and transferring information from a design file to a manufacturing machine." App. 8a.

The Court then stated that the patent was automating what had been done before by deriving then transferring data to a manufacturing machine. App. 8a-9a. That would appear to say that the abstract idea was "automating" rather than "extracting and transferring." Of course, the claims could not preempt that "idea" either.

Either way, unless one calls a human – with a soapstone marker deriving parameters from a paper print-out using a ruler and drawing them onto a part – a "manufacturing machine," this fact-finding was plain error. The only evidence before the court was that no machines capable of using such extracted information existed in the prior art, let alone were conventional. *See* pp. 15-16, *supra*. More important for this Petition, however, the finding was done at summary judgment, by a judge, rather than by a jury.

For *Alice* step two, the Court ruled that automating a step is not a technical improvement, *even if inventive under the Patent Act*. App. 16a-18a. With respect to the volume of evidence that the claims represented technical advantages, the Federal Circuit ruled that the claims were not limited to the context of marking beams – without commenting on the extensive evidence that the claimed process is what results in the improvement in that context (as well as in other contexts). App. 17a. For the evidence that the claims exhibit *every* objective indicium of nonobviousness – solving a long-felt need, industry acclaim, prompt copying by competitors, customer demand, and litigation and licensing success, all in an industrial setting – the Federal Circuit held it to be "irrelevant" to whether the patented claim was a technological innovation. App. 17a.

REASONS FOR GRANTING THE PETITION

I. THE SUPREME COURT NEEDS TO PROVIDE GUIDANCE DEFINING "DIRECTED TO" UNDER STEP ONE OF *ALICE*

In *Alice,* this Court declined "to delimit the precise contours of the 'abstract ideas' category." *Alice*, 573 U.S. at 221. Presumably, and as occurs in many areas of the law, this Court deferred further explanation to permit further refinement in the lower courts.

Unfortunately, ten years later, the result has been chaos rather than refinement. There is remarkable unanimity that further guidance is needed on how to determine whether a claim is ineligible under the abstract idea exception. The appeals court, Patent Office and the Solicitor General agree.

As noted above, the Federal Circuit has split 6-6 on Section 101. In dissent several judges observed that the Federal Circuit's "rulings on patent eligibility have become so diverse and unpredictable as to have a serious effect on the innovation incentive in all fields of technology." *Am. Axle 2*, 966 F.3d at 1357 (Newman, J., dissenting, joined by Moore, O'Malley, Reyna, and Stoll, JJ.). Former Chief Judge of the Federal Circuit, the Honorable Paul Michel, wrote that:

> Federal Circuit guidance on saying "directed to" means putting a "focus on the claimed advance," *see, e.g., Training Techs. Int'l v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019), and the Supreme Court's varying formulations

> (e.g., "recited," "drawn to," "cover," "directed essentially to," "focus on," "involved in," "described"), have quite arguably rendered the "directed to" formulation overly subjective and panel-dependent at the Federal Circuit.

Judge Paul Michel (Ret.) & John Battaglia, *Flaws in the Supreme Court's § 101 Precedent and Available Ways to Correct Them*, https://ipwatchdog.com/2020/04/27/flaws-supreme-courts-§ 101-precedent/id=121038/ (April 2020) (advising practitioners to return to looking at the underlying facts of Supreme Court precedent rather than Federal Circuit interpretation of Supreme Court language).

The Patent Office similarly notes the doctrinal gnarl we are in. *See*, *e.g.*, U.S. Patent & Trademark Office, *Patent eligible subject matter: Public views on the current jurisprudence in the United States*, 18-41 (June 2022) (many stakeholders find the current state of 35 U.S.C. § 101 law unclear and unpredictable, with consequences for American innovation investment, competition, and even national security).

Accordingly, the Solicitor General recently urged this Court to grant *certiorari* over the abstract-idea exception to patentability twice. In *American Axle*, the United States observed that "[t]he *Mayo/Alice* framework has given rise to substantial uncertainty" (Brief of the United States as Amicus Curiae[6] at 10), "fractured the Federal Circuit" (*id.* at 19), and that the Federal Circuit's

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6. *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, No. 20-891, 2021 U.S. Dist. Ct. Briefs LEXIS 6689 (May 24, 2022).

application of that framework has left the Patent & Trademark Office with little guidance to apply Section 101 in a consistent manner (*id.* at 19-20.)

In two more cases, the Solicitor General further urged this Court to grant review. *See* Brief for the United States as Amicus Curiae, *Interactive Wearables, LLC v. Polar Electro Oy* and *Tropp v. Travel Sentry, Inc.*, Nos. 21-1281 and 22-22, 2023 U.S. S. CT. BRIEFS LEXIS 1123 (April 5, 2023) (arguing for eligibility in *Interactive Wearables* and ineligibility in *Tropp*). In doing so, the Solicitor General observed that "[r]ecent Federal Circuit precedent reflects significant confusion over the application of this Court's Section 101 decisions." *Id.* at *29.

This Court needs to further "delimit the precise contours of the 'abstract ideas' category." *Alice*, 573 U.S. at 221. The lower courts are not getting there alone.

A. This Court Needs to Confirm (or Overrule) *Diehr's* Holding That Patent Claims "Directed To" Statutory Subject Matter Are Statutory, Whether or Not Improved With Supposedly Nonstatutory Matter

Diehr unambiguously holds that incorporating a nonstatutory idea into a statutory process remains statutory/patent eligible. *Diehr* reproduced the text of the patent claim in the body of the opinion (also reproduced at p. 8 n.3, *supra*). *Diehr*, 450 U.S. at 179 n.5. The ***only*** claim step that does not involve measuring elapsed time and calculation of the Arrhenius equation is:

> opening the press automatically when a said comparison [of elapsed time and the required

> cure time calculated using the Arrhenius equation] indicates equivalence.

Id. The invention was nothing more than using the Arrhenius equation to determine when to automatically open the press. Opening the press without using the Arrhenius equation was conventional to say the least – one cannot get a cured rubber object out without opening the press.

The logic behind this Court's ruling in *Diehr* is undeniable. Under the 1870 and 1952 Patent Acts, the claims define the invention and the claims need to be patent eligible – not some abstraction of the idea behind the claim. *See* p. 5, *supra*.

A "method of operating a rubber-molding press," that includes "opening the press" is a manufacturing process that is both conventional and plainly eligible under Section 101. Such a claim may be invalid under Section 102 (novelty) or Section 103 (obviousness), but those are separate requirements for patentability.

Adding the Arrhenius equation to the process *does* add an abstract idea (in the form of a mathematical equation) to the statutory process. But adding additional steps to a statutory process should not remove eligibility – the claimed invention is still to a manufacturing process. And so *Diehr* held.

As this Court noted in *Alice*, any claim can be described at an abstract level. *Alice*, 573 U.S. at 217. A telephone merely reproduces sound using electrical signals. *Ipso facto*, every claim necessarily incorporates

an abstract idea at some level. Incorporating an abstract idea alone cannot render a patent claim ineligible or there would be no eligible claims. As *Alice* cautioned the exceptions should not be too broadly applied "lest [the exceptions] swallow all of patent law." *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 71). The inquiry must be whether the claim is limited to statutory subject matter, not whether it includes an abstract idea at some level.

Section 103 confirms this. According to Section 103, "[p]atentability shall not be negated by the manner in which the invention was made." 35 U.S.C. § 103. If a statutory process is improved by application of an abstract idea, like the Arrhenius equation, application of the abstract idea does not negate patentability. Again, the judicial exception was not intended to remove improvements to statutory processes from eligibility.

Put another way, the 1870 and 1952 Patent Act required that the scope of the invention be claimed. This Court's instruction that the crux of the matter is whether an abstract idea is preempted by the claim. *Alice*, 573 U.S. at 217 ("The former 'would risk disproportionately tying up the use of the underlying' ideas…, and are therefore ineligible for patent protection. The latter pose no comparable risk of pre-emption, and therefore remain eligible….").[7] In *Diehr*, the abstract idea of the Arrhenius equation was not preempted. The use of the Arrehenius equation in curing rubber was preempted, but curing

7. One year after *Alice*, a Federal Circuit panel suggested that preemption is not relevant if a claim is drawn to ineligible subject matter. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). This is circular, in conflict with this Court's ruling in *Alice*, and further reflects the need for this Court's guidance.

rubber is statutory and that preemption is the very point of a patented right to exclude.

The very premise of the patent system – providing a limited right to exclude in exchange for public disclosure[8] – requires this outcome. Would it be preferrable for use of the Arrhenius equation to remain a trade secret because the improvement to manufacturing/curing rubber could be characterized as abstract? The entire patent system is premised on answering "no" and encouraging disclosure.

This Court's more recent jurisprudence does not suggest otherwise. As noted above (*see* pp. 10-11, *supra*), *Bilski* and *Alice* both involved claims generally directed to plainly nonstatutory subject matter (hedging risk and exchanging obligations). There was no attempt to limit the claims to a statutory category other than, in *Alice*, recitation of generic computer components.

To be sure, reciting generic computer components, or some other form of automation, will not *save* claims directed to nonstatutory subject matter. This Court so held in *Alice*.

If *Diehr* remains good law, however, the converse is not true. Reciting computer components, automation, or abstract ideas including mathematical equations, does not *remove* an otherwise statutory process from eligibility. This Court has never made such a ruling and this Court needs to correct the Federal Circuit's error.

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8. *E.g., Graham* v. *John Deere Co.,* 383 U.S. 1, 9 (1966) (describing a patent as "a reward, an inducement, to bring forth new knowledge").

The Solicitor General seems to agree. *Interactive Wearables* Brief, 2023 U.S. S. CT. BRIEFS LEXIS 1123 at *20 ("The scope of the abstract-idea exception may be further clarified by what it does *not* include. An automobile is not an abstract idea. A remote control is not an abstract idea. … Generally speaking, technologies and industrial processes are not abstract ideas.").

Meanwhile, the Federal Circuit seems to improperly treat *Diehr* as bad law. In this case, the Federal Circuit distinguished *Diehr* as pre-dating *Alice* (as though *Alice* overruled *Diehr sub silentio*) and by citing a Federal Circuit opinion in *Thales Visionix* as characterizing *Diehr* as "recit[ing] specific means for technological improvements." App. 14a & n.6. Neither the opinion, nor *Thales Visionix* which it cites, explain what those improvements might be ***other than application of the Arrhenius equation to achieve a better outcome***. *Thales Visionix* cites only footnote 15 of *Diehr*. *See Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1348, 1348 n.2 (Fed. Cir. 2017). *Diehr*'s footnote 15 describes nothing different from the manual process, beyond automating by using the Arrhenius equation. *Diehr*, 450 U.S. at 193 n.15. *Diehr* Note 15 does cite that the rubber product "has been perfectly cured," i.e., the superior outcome. *Id.* That is, superior technological outcome is a technological improvement and is not ineligible. Superior technical outcome was also proved for the '719 patent. *See* pp. 19-21, *supra*.

In short, if *Diehr* remains good law and statutory processes should not be dissected for possible underlying improvement-by-abstract-idea (mathematical or otherwise), this Court needs to remind the Federal Circuit that this is the case. If *Diehr* has been overruled, patent

jurisprudence would greatly benefit from this Court expressly saying so.

Put another way, this Court observed in *Alice* that Section 101 does not preclude patenting an invention "designed to solve a technological problem in 'conventional industry practice'" *Alice*, 573 U.S. at 223 (quoting *Diehr*, 450 U.S. at 177). Contrary to this Court's instruction, the Federal Circuit's approach of trying to distill an improvement to a technological problem to some arbitrary level of abstraction and then test it for abstractness would remove from patent eligibility (and therefore from public disclosure) swaths of improved industrial processes.

Here, the invention solved a technological problem in conventional industry practice. By abstracting claims to their "essence" irrespective of technological improvement (through abstract idea or otherwise) and treating *Diehr* as effectively overruled, the Federal Circuit is departing from this Court's precedent. The Federal Circuit's jurisprudence needs to be brought back in line.

B. If This Court Overrules *Diehr*, This Court Needs to Provide Guidance on How to Abstract a Claim

The Federal Circuit's approach of defining an essence or idea of the claim to test for abstractness finds little guidance in this Court's jurisprudence. The need is immediate.

Ideas involving laws of nature or mathematical equations involve "ideas" that are straightforward to identify, e.g., as in *Mayo* and *Diehr*. Not so, for abstract ideas not involving equations or algorithms.

For business methods, this Court has noted that "some business method patents raise special problems." *Bilski*, 561 U.S. at 608. Unfortunately, difficult cases (business method patents) have led to bad law in traditionally eligible areas.

For business methods, this Court readily identified ideas of claims directed to nonstatutory matter, like hedging risk and exchanging obligations, e.g., *Bilski* and *Alice*. But this Court has not addressed how to abstract and test for eligibility a claim otherwise directed to a traditional statutory process like manufacturing – expressly leaving that to the future. *See Bilski*, 561 U.S. 609 ("Rather than adopting categorical rules that might have wide-ranging and unforeseen impacts, the Court resolves this case narrowly on the basis of this Court's decisions in *Benson, Flook,* and *Diehr*"); *Alice*, 573 U.S. at 221 ("we need not labor to delimit the precise contours of the 'abstract ideas' category in this case. It is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here.").

In the absence of this Court's guidance, defining the "idea" of a claim has proved problematic for the Federal Circuit. Every claim involves an abstract idea. *Alice*, 573 U.S. at 217. So selecting a level of abstraction is difficult, there is little guidance on how to do it, and frankly, the result is highly panel dependent as Judge Michel observed in the quote above. *See, e.g.*, *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1299-1300 (Fed. Cir. 2016) ("What relative level of abstraction should we employ?"); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) ("An abstract idea can generally be described at

different levels of abstraction."); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) ("describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule").

The decision here illustrates the problem. The opinion describes the "idea" as "identifying, extracting and transferring data… for the purpose of manufacturing" (App. 8a) generically, but without discussing that "idea," whether it is the right level of abstraction or why. At the district court level, the "idea" seemed to include solving for human error. App. 30a-31a. And on briefing before the Federal Circuit (quoted below), Peddinghaus alternatively described the idea as extracting intersection parameters (narrower than data generically) and converting that into instructions a machine can use.

After characterizing the idea as extracting and transferring data of any kind, the opinion analyzes a "claimed advance" of "automating a previously manual process of transferring information from a CAD design model to a manufacturing machine" (App. 8a) – which sounds like analyzing an "abstract idea" different than the one the opinion articulated a few paragraphs before. And the opinion fails to explain why this idea is abstract or ineligible. Generally, automating a known manufacturing process may be unpatentable as not inventive/obvious. *See, e.g.*, MPEP 2144.04[III]; *Soverain Software LLC v. Newegg Inc.*, 705 F.3d 1333, 1340 & 1344 (Fed. Cir. 2013) ("routine incorporation of Internet technology into existing processes" is obvious). A conventional manufacturing process fits within Section 101's list of the type of things that can be patented. Automating a

conventional process might be unpatentable as obvious, but it is illogical to say that it is abstract.

Should this Court adopt the Federal Circuit's approach of trying to identify and test the abstractness of the idea behind an improvement to a statutorily eligible process, this Court should provide guidance on how to do so (and by whom).

1. At a Minimum the Level of Abstraction Should Include the Reasons for Patentability

As noted above, the purported definition of the "idea" by the Federal Circuit could not support invalidation. This Court has made plain that preemption is the touchstone of ineligibility. *Alice*, 573 U.S. at 216. As also noted above, the "idea" identified by the Federal Circuit – whether it is extracting and transferring data generically or automating a previously known manual process – is not even remotely preempted by the claims which, among other things, limits the data to intersection parameters defining an intersection.

But more fundamentally, the "idea[s]" that the Federal Circuit identified cannot be the essence or nature of the invention because they had literally nothing to do with patentability. These "ideas" are not patentable/inventive, irrespective of Section 101 and these "ideas" did not lead to the '719 patent.

In *Mayo* the law of nature was the relationship between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will

prove ineffective or cause harm, *Mayo Collaborative Servs.*, 566 U.S. at 1298, which was unknown and was what lead to the patent being (incorrectly) granted by the USPTO – not some generic step of altering treatment based on the natural law. In *Bilski* and *Alice* it was not automation or computer systems that led to those patents being (incorrectly) granted by the USPTO; it was the particular (nonstatutory) business steps of acquiring interests (*Bilski*) or exchanging obligations (*Alice*).

Here, what led to the '719 patent being granted was automatic identification from a CAD model *of intersection paratemers that define an intersection of two components one of which is being manufactured* and then using that on the manufacturing line with a machine capable of doing so.

Thus, Peddinghuas alternatively argued to the Federal Circuit that the "idea" of the claims is:

> (1) identifying the dimensions and intersections of the components of a three-dimensional design,
>
> (2) extracting that information from a [3D] design model, and
>
> (3) converting that information to instructions for manufacturing the object.

Peddinghaus Br. at 2. The shifting levels of abstraction reflect that it is done without principle or guidance.

Peddinghaus's position on appeal was close, but Claim 7 further recites the machines, or:

> (4) manufacturing machine(s) to make the component, which (unlike any conventional machine) can receive and use instructions about dimensions *and intersections* to manufacture the component.

C.A. App. 26 ('719 patent, claim 7). This characterization of the "idea" is closer to the nature of the invention, i.e., what made the claim patentable. And it is concrete rather than abstract. Certainly, the Federal Circuit did not explain why *this idea* is abstract or even hold it to be so abstract as to be patent ineligible.

In short, the Federal Circuit is adrift in how to identify the "idea" of a claim. The result is that definitions of the idea of a claim are made at arbitrary levels of abstraction.

If every claim to ostensibly statutory subject matter is to be distilled into an abstract idea behind the claim, this Court needs to explain (the tautological truth) that the "idea" of a patent claim is bound to the reasons why the claim/invention was patentable, i.e., new and not obvious from what came before.

2. The Nature of the Invention and Whether That is Too Abstract to Meet the Statute Are Fact Issues for a Jury

The Federal Circuit opinion rests on its statement that:

> the focus of the claimed advance, as the patent specification indicates, is automating a previously manual process of transferring

> information from a CAD design model to a manufacturing machine.

App. 8a.

That is a misreading of the specification and a gross overgeneralization of the "claimed advance." The specification identifies two issues – automated transfer and use of information like dimensions (which it turns out was not inventive irrespective of patent eligibility) and identification and use of intersection parameters on the manufacturing line, which had never been done before. *See* pp. 15-16, *supra*.

In fact, there was unrebutted evidence that there was no prior art "manufacturing machine" capable of using intersection parameters before Ficep's invention, conventional or otherwise. *See* p. 16, *supra*. The above finding of the Federal Circuit is easily identified as having been made, and as being wrong.

Of course, incorrect fact-finding and error at summary judgment are not generally worthy of Supreme Court review. Whether this is a fact issue or question of law, and if a fact issue, whether there is a right to a jury determination, *are* issues worthy of this Court's time.

In general, the teaching of a patent specification (to one of ordinary skill in the art) and the "scope and content of the prior art" are fact issues. *See, e.g., Teva Pharmaceuticals USA v. Sandoz, Inc.*, 574 U.S. 318, 326-27 (2015); *Retractable Tech. v. Becton, Dickinson and Co.*, 653 F.3d 1296, 1310 (Fed. Cir. 2011). The teaching of the patent specification has sometimes been held to

be for the court and sometimes for a jury. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 189-90 (1996) (for court during claim construction); *BJ Servs. Co. v. Halliburton Energy Servs., Inc.*, 338 F.3d 1368, 1371 (Fed. Cir. 2003) ("Although enablement is a question of law, … it is amenable to resolution by the jury"); *see also Vas-Cath Inc. v. Mahurkar*, 935 F.3d 1555, 1563 (1991) ("compliance with the 'written description' requirement of § 112 is a question of fact"). The scope and content of the prior art has uniformly been held to be a fact question for a jury. *Retractable Tech.*, 653 F.3d at 1310.

Here, the Supreme Court needs to instruct the lower courts that the "essence" of the invention as it relates to "conventional" processes and machines is a fact question and that both its characterization, and whether it is so abstract as to be ineligible, it should be decided by a jury.

II. THE SUPREME COURT NEEDS TO PROVIDE GUIDANCE ON WHAT IS A TECHNICAL ADVANCE UNDER STEP TWO OF *ALICE*

The dangerous place to which the Federal Circuit's jurisprudence leads is demonstrated with a simple hypothetical. Suppose that automation of part of an industrial process were inventive. At this point and in most settings, automation is an obvious thing to do. But in this hypothetical, automating is not obvious. That is, the automation is inventive. And in this hypothetical, the automation has technical advantages. To put a fine point on it, suppose that it dramatically reduces the risk of catastrophic failure.

According to the Federal Circuit, such an invention is not even eligible for patent protection. Automating,

according to the Federal Circuit, is irretrievably abstract whether or not it results in meaningful technical improvements beyond (the obvious improvement of) speed of processing. According to the Federal Circuit, automation is ineligible for protection, even if inventive as defined in the Patent Act under Section 103.

The purpose of the Patent Act is to encourage public disclosure in exchange for a limited period of monopoly. *Graham,* 383 U.S. at 9. Here, the Federal Circuit would tell inventors to keep these inventions as trade secrets – patent protection is unavailable. That runs counter to the purpose of the Patent Act and this Court should intervene.

A. This Court Should Clarify That Inventions Resulting in Technology Improvements to Statutory Subject Matter Are Patent Eligible

Although Peddinghaus should have the burden of proof, Ficep proved (without rebuttal) that:

- the prior art did not generate intersection parameters from a 3D model – rather, a paper (2D) print-out was made first and then analyzed and measured in 2D using a ruler;

- manual measurement of a print-out using a ruler, and hand marking with a ruler, is a completely different process than calculating the parameters in 3D and automatically using them within the line; and

- the result is a powerfully different and superior manufacturing process/line, beyond just speed of calculation.

See C.A. App. 838-842 (Colombo Decl., ¶¶6-13); 781-782 (Chipman Decl., ¶16).

For the latter, Ficep proved the claim here is:

- Meaningfully more accurate.
- Meaningfully more reliable.
- Requires less floor space (since layout stations are not required).
- Free of requiring a crane to move components back and forth from the manufacturing machines.
- Less expensive in labor cost by almost half.
- Meaningfully faster because components do not have to be taken on and off the manufacturing line.
- Meaningfully faster than humans trying to decipher 2D drawings.

C.A. App. 842 (Colombo Decl., ¶13); 786-787 (Chipman Decl., ¶21).

Moreover, Ficep proved industry recognition (including an article specifically lauding the claimed invention), copying of Ficep by others in the industry including Peddinghaus, commercial success including demand for the patented feature, litigation success and licensing success. C.A. App. 787-792 (Chipman Decl., ¶¶24-30); 842 (Colombo Decl., ¶¶13-15); 819-822 (Faulkner Article); 179-180 (Consent Final Judgment in *Ficep Corp.*

v. Voortman USA Corp., No. MJG-13-429 (D. Md. Apr. 24, 2018)). And Ficep proved that all are tied to the claimed invention, i.e., there is a "nexus" between the objective factors and the claims.

The Federal Circuit found all this "irrelevant" (App. 17a), representing yet another split within the Federal Circuit on Section 101. *Compare with Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) ("analysis of § 101 is facilitated by considerations analogous to those of § § 102 and 103"); *Trading Techs. Int'l, Inc. v. CQG, Inc.*, 675 F. App'x 1001, 1005 (Fed. Cir. 2017).

The notion that this Court's standards for inventiveness are not even relevant for assessing inventiveness under Section 101should not stand. This Court should grant review.

B. Technological Advance Is a Fact Question for a Jury

The Patent Act created a right to a jury trial on the facts that underlie a determination of inventiveness. *Markman*, 517 U.S. at 377 ("there is no dispute that infringement cases today must be tried to a jury"); *Graham*, 383 U.S. at 17-18 (finding that obviousness, while a question of law, is based on underlying factual findings); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 603 (Fed. Cir. 1985) ("The right to a jury trial on issues of patent validity… is protected by the Seventh Amendment."). If left to stand, the Federal Circuit's decision in this case takes away that right in favor of an "inventiveness" test unmoored from the patent claim limitations, unmoored

from any articulated standards or tests for deciding inventiveness, deprived of the constitutional right to a jury trial, and left to judicial whim. That cannot be the law.

At a minimum, there is a fact question as to the inventiveness of Ficep's claims. Ficep is entitled to a determination by a jury of whether Peddinghaus carried its burden to prove the claims not-inventive by clear and convincing evidence. *See Patlex Corp.*, 758 F.2d at 603; *In re Tech. Licensing Corp.*, 423 F.3d 1286, 1290 (Fed. Cir. 2005).

CONCLUSION

For the foregoing reasons, Ficep respectfully requests that this Court issue a writ of certiorari to review the judgment of the Federal Circuit.

Respectfully submitted,

Matthew B. Lowrie
Counsel of Record
Kevin M. Littman
Foley & Lardner LLP
111 Huntington Avenue, Suite 2500
Boston, MA 02199
(617) 342-4006
mlowrie@foley.com

Counsel for Petitioner

APPENDIX

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APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, FILED AUGUST 21, 2023

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2022-1590

FICEP CORPORATION,

Plaintiff-Appellant,

v.

PEDDINGHAUS CORPORATION,

Defendant-Appellee.

Appeal from the United States District Court for the District of Delaware in No. 1:19-cv-01994-RGA, Judge Richard G. Andrews.

August 21, 2023, Decided

Before PROST, WALLACH, and CHEN, *Circuit Judges.*

CHEN, *Circuit Judge.*

Ficep Corporation (Ficep) appeals from the United States District Court for the District of Delaware's grant of summary judgment holding claims of U.S. Patent 7,974,719 ('719 patent) patent ineligible under 35 U.S.C.

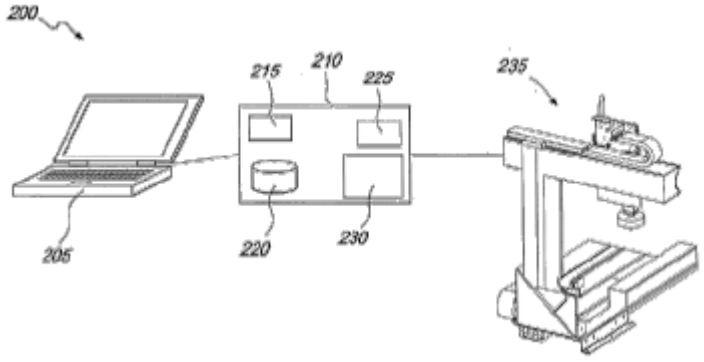
Appendix A

§ 101. *Ficep Corp. v. Peddinghaus Corp.*, 587 F. Supp. 3d 115 (D. Del. 2022) (*Opinion*). Because we agree that the claims are directed to an abstract idea, we *affirm*.

Background

I

The '719 patent is directed to the automatic transfer of design data contained in a computer-aided design (CAD) model[1] to a machine that can manufacture an object based on that design data. '719 patent col. 2 ll. 9-25. Figure 2 shows the system of the '719 patent, which includes a computer (205), programmable logic controller (210) having a receiver (215), storage unit (220), transmitter (225) and monitor (230), and manufacturing machine (235). '719 patent col. 5 l. 4 — col. 6 l. 8.



1. The specification explains that a CAD model is "a three-dimensional scale model of a structure or device" that may be "visually produced on a computer display or printed as a schematic diagram." '719 patent col. 1 ll. 14-20.

Appendix A

The computer stores a design model, e.g., a CAD model, and communicates the design model to the programmable logic controller. '719 patent, col. 5 ll. 17-26, col. 6 ll. 21-40. The programmable logic controller then identifies and extracts information from the design model for transmission to the manufacturing machine. '719 patent col. 3 ll. 53-62, col. 6 ll. 41-57. The design model includes information such as "design specifications related to the structure or device"[2] and "intersection and/or manufacturing parameters," which are "design parameters related to intersections and points of contact or connection between components that come into contact with other components."[3] '719 patent col. 1 ll. 20-53, col. 4 ll. 11-14.

With prior methods of manufacturing a component from a CAD model, "a human operator typically must program manually the manufacturing machines associated with an assembly line based on the computer-aided design display." '719 patent col. 1 ll. 26-30; *see also id.* col. 1 ll. 32-36 ("Human intervention is generally necessary to review the computer-aided design information and to provide the necessary information to the automated assembly line apparatus so that the structure or device may be manufactured."). A problem arises, however, "when the specialized human operator, capable of inputting data into

2. Examples of design specifications include "welding characteristics, names of parts and components, dimensional references for squaring, and so forth." '719 patent col. 1 ll. 20-25.

3. Examples of intersection and/or manufacturing parameters include "distance from the floor, bolts fixing point, the point of support of the beam, et cetera." '719 patent col. 4 ll. 24-27.

the manufacturing machine, is unavailable." '719 patent col. 1 ll. 37-43. The '719 patent thus observes that "there is a direct need to improve the way in which the design parameters for all the components of an object . . . are provided to a manufacturing machine." '719 patent col. 1 ll. 43-49. The patent's proposed solution to improve efficiency and accuracy, lower cost, and "eliminate the possibility of operator error when providing instructions to automated assembly line equipment" is to remove the human operator from the data transfer equation and instead automatically extract and transfer information from the design model to the manufacturing machine. '719 patent col. 1 ll. 9-14, col. 1 ll. 49-58, Abstract.

Claim 7 is representative[4] and recites:

> 7. An apparatus for automatic manufacture of an object, comprising:
>
> a computing device adapted to create a design model of an object having multiple individual components, at least two of the individual components defining an intersection at which the two components are in contact with one another;
>
> at least one programmable logic controller in communication with the computing device and with at least one manufacturing machine;

4. The district court treated claim 7 as representative. *Opinion*, 587 F. Supp. 3d at 120. The parties do not dispute this on appeal. Appellant's Br. 16; Appellee's Br. 15 n.1.

a receiver associated with the programmable logic controller for receiving the design model of the object;

a database unit adapted to store the design model received at the receiver;

a processor which is associated with the programmable logic controller and extracts from the design model a plurality of dimensions of components which define a plurality of components of the object;

wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components;

wherein the processor extracts from the design model the intersection parameters;

a transmitter associated with the processor for transmitting the intersection and machining parameters and the component dimensions from the programmable logic controller to the at least one manufacturing machine; and

wherein the at least one manufacturing machine manufactures the components based at least in part on the transmitted component dimensions and on the transmitted intersection and manufacturing parameters.

'719 patent at claim 7.

II

Ficep sued Peddinghaus Corporation (Peddinghaus) in the District of Delaware, alleging infringement of one or more claims of the '719 patent. *Opinion*, 587 F. Supp. 3d at 118. Peddinghaus moved for summary judgment on the basis that the '719 patent's claims are patent ineligible under 35 U.S.C. § 101. *Id.* The district court granted Peddinghaus's motion, concluding that the claims of the '719 patent are directed to an abstract idea without an inventive concept. *Id.* at 118, 125, 127. The district court identified the abstract idea as "identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object," finding that the '719 patent "seeks to simply automate the prior art methods to minimize human error and fails to recite any specific technological improvement to manufacturing or computer technology." *Id.* at 123, 125. The district court also determined that the claims contain no inventive concept because the claims "simply replac[e] the human operator with a conventional machine," which "is not sufficient to transform the claims into patent-eligible subject matter." *Id.* at 125-26.

Ficep timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

Appendix A

Discussion

We review the grant of summary judgment under the law of the regional circuit, here the Third Circuit. *Frolow v. Wilson Sporting Goods Co.*, 710 F.3d 1303, 1308 (Fed. Cir. 2013). The Third Circuit reviews the grant of summary judgment de novo. *DiFiore v. CSL Behring, LLC*, 879 F.3d 71, 75 (3d Cir. 2018). Patent eligibility under 35 U.S.C. § 101 is ultimately an issue of law that we review de novo. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018).

Section 101 provides that "[w]hoever 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 requirements of" Title 35 of the United States Code. The Supreme Court has long held that "[l]aws of nature, natural phenomena, and abstract ideas are not patentable" under § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216, 134 S. Ct. 2347, 189 L. Ed. 2d 296 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589, 133 S. Ct. 2107, 186 L. Ed. 2d 124 (2013)).

In *Alice* and *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 132 S. Ct. 1289, 182 L. Ed. 2d 321 (2012), the Supreme Court set forth a two-step test for determining whether claimed subject matter falls within one of the judicial exceptions to patent eligibility. *Alice*, 573 U.S. at 217-18; *Mayo*, 566 U.S. at 77-78. First, we "determine whether the claims

at issue are directed to a patent-ineligible concept," such as an abstract idea. *Alice*, 573 U.S. at 218. Second, if the claims are directed to a patent-ineligible concept, we "examine the elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application." *Id.* at 221 (cleaned up).

I. *Alice*/*Mayo* Step One

We agree with the district court that claim 7 is directed to the patent-ineligible abstract idea of extracting and transferring information from a design file to a manufacturing machine.

To determine whether the claims are directed to an abstract idea, we evaluate "the focus of the claimed advance over the prior art to determine if the claim's character as a whole is directed to excluded subject matter." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (cleaned up). Where the "focus of the claimed advance over the prior art" shows that "the claim's 'character as a whole' is directed to" steps that "can be performed in the human mind, or by a human using a pen and paper" the claim is for a patent-ineligible abstract idea. *In re Killian*, 45 F.4th 1373, 1379 (Fed. Cir. 2022).

Here, the focus of the claimed advance, as the patent specification indicates, is automating a previously manual process of transferring information from a CAD design model to a manufacturing machine. The manual activity

required a human to identify and extract information from a design model and transfer the information to a manufacturing machine. '719 patent col. 1 ll. 26-36. The parties' representations to the district court in their joint claim construction brief further confirms this: "The specification of the '719 patent explains that 'a problem arises when the ***specialized*** human operator, capable of inputting data into the manufacturing machine, is unavailable' to perform this function," where "[t]he 'specialized' operator is a human who can translate the CAD drawing into the instructions that program the machine on where to make marks." J.A. 1278 (emphasis in original). The '719 patent claims "a programmable logic controller" that automates the identification, extraction, and transfer of information from a design model. '719 patent at claim 7, col. 1 ll. 8-13 ("[T]he present invention relates to systems and methods for automatic manufacture of an object based on automatic transmission of a three-dimensional rendering of the object, such as a rendering from a CAD to an assembly line for manufacture."), col. 7 ll. 33-38 ("[S]ystems and methods . . . capable of extracting automatically from a design model the dimensions of the components and the intersection and/or machining parameters of the components and of instructing a manufacturing machine to manufacture an object based on this information."), col. 1 ll. 53-55 ("[I]t is desirable to eliminate the possibility of operator error when providing instructions to automated assembly line equipment.").

Automating a previously manual process is not sufficient for patent eligibility. The '719 patent is a "quintessential 'do it on a computer' patent," much

like the one we held abstract in *University of Florida Research Foundation, Inc. v. General Electric Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019). There, the patent at issue sought to improve upon "pen and paper methodologies" of acquiring, analyzing, and displaying bedside patient information from various bedside machines by using device drivers to synthesize and present the data from multiple bedside devices in a single interface. *Id.* We held the claims abstract because the patent "acknowledge[d] that data from bedside machines was previously collected, analyzed, manipulated, and displayed manually" and "simply propose[d] doing so with a computer." *Id.; accord Intell. Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (holding abstract claims "directed to . . . collecting, displaying, and manipulating data"); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353-54 (Fed. Cir. 2016) (holding abstract claims directed to "collecting information, analyzing it, and displaying certain results of the collection and analysis").

Ficep likens its patent claims to the patent-eligible claims in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016), on the view that its claims identify intersection parameters differently than a human. Appellant's Br. 49-53. Ficep asserts that the manual method of identifying intersection parameters required using a crane to take a component off the manufacturing line, taking a two-dimensional print-out of the design to identify the parts that intersected and the location of the intersection, using a ruler and soapstone to mark the intersection, and then using a crane to move the component back to the manufacturing line. Appellant's

Br. 12-13, 52. In contrast to the prior manual methods, according to Ficep, the claimed invention identifies the intersection parameters from the three-dimensional CAD design model. Appellant's Br. 51-52.

We are not persuaded, however, that the claims require a novel means of garnering the intersection parameters for an object. On its face, claim 7 simply calls for a "computing device" to create a design model, and then a "processor" that "identifies" and "extracts from the design model the intersection parameters;" the claim does not specify whether the design model somehow on its own generates the intersection parameter data based on some other, unmentioned data, or whether the intersection parameter data is simply fed into the computing device by hand to help create the design model. The short patent specification likewise offers no clues as to the means for how the intersection parameters were derived; that information simply exists in the design model. Thus, when focusing on the relevant aspect of the claims—automatically providing information to a manufacturing machine—we do not see any difference between the manual process and the automated process, other than performance of the step by a computer.[5]

5. At oral argument, Ficep's counsel contended that the "computing device" could generate the intersection parameters when creating the design model, but the "processor" alternatively could be the device that generates the intersection parameters when it "identifies" them. Oral Arg. at 11:10-13:40; '719 patent at claim 7. The fact that Ficep could not settle on one understanding of claim 7 as to the origins of the intersection parameters underscores how unlimited the claim is as to this feature.

Even accepting Ficep's argument that that the manual process and claimed automated process differ because the intersection parameters can be extracted directly from the design model, this difference alone does not make the claims non-abstract. The claims do not require any particular method of deriving intersection parameters and are broad enough to encompass a human deriving intersection parameters and adding this information to the design model for later extraction. Ficep itself admits that humans could calculate intersection parameters from other data contained in the design model. Appellant's Br. 12 ("A CAD model would include a complete design, and thus intersection parameters *could* be derived from CAD models."); *see also* Appellant's Br. 28; Appellant's Reply Br. 27 (analogizing identifying intersection parameters from a CAD model to calculating the hypotenuse of a triangle using information in the CAD model). Thus, deriving intersection parameters from a design model still encompasses an abstract idea because it can be performed by the human mind or a human using a pen and paper. *In re Killian*, 45 F.4th at 1379, 1382; *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1317 (Fed. Cir. 2021); *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020); *see also SAP America, Inc. v. Investpic, LLC*, 898 F.3d 1161, 1167-68 (Fed. Cir. 2018).

As to Ficep's *McRO* argument, the claimed automated process differed from the manual process in that case, but the claim also provided "a specific means or method that improves the relevant technology." *See McRO*, 837 F.3d at 1314-15. In *McRO*, the claims were not abstract because

they were directed to "a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type." *McRO*, 837 F.3d at 1314. "The claimed improvement was to how the physical display operated (to produce better quality images)." *SAP*, 898 F.3d at 1167.

Unlike the claims in *McRO*, the claims here do not recite any specific means or method for deriving intersection parameters. Ficep repeatedly emphasizes that the invention is not directed to *how* to identify intersection parameters from a design model. Appellant's Br. 51 ("[T]he invention here was not *how* to identify intersection parameters using a computer, but rather, when setting up one's manufacturing line, the decision to do so from a 3D CAD model and to use them within the manufacturing line rather than outside it"); Appellant's Reply Br. 26 ("The improvement to manufacturing technology does not depend on the specific algorithm for identifying parameters"). As drafted, the claims of the '719 patent do not recite any specific means or method for identifying intersection parameters and are unlike the technical-improvement claims of *McRO*.

Ficep also analogizes its claims to those in *Diamond v. Diehr*, 450 U.S. 175, 101 S. Ct. 1048, 67 L. Ed. 2d 155 (1981) and other inventions directed to "real world" systems. Appellant's Br. 39-43 (citing *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1345, 1349 (Fed. Cir. 2017); *XY, LLC v. Trans Ova Genetics, LC*, 968 F.3d 1323, 1330-31 (Fed. Cir. 2020); *CardioNet LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1370-71 (Fed. Cir. 2020); and *Ecoservices, LLC v. Certified Aviation Services, LLC*,

830 F. App'x 634, 636, 642-43 (Fed. Cir. 2020)); Appellant's Reply Br. 4-10. But the claims in these cases were patent eligible because, like *McRO*, they recited specific means for technological improvements. *Diehr*, 450 U.S. at 184, 187 (claims "describe[d] in detail a step-by-step method" for curing synthetic rubber that would "significantly lessen[] the possibility of 'overcuring' or 'undercuring'")[6]; *Thales Visionix*, 850 F.3d at 1345, 1349 (claims used inertial sensors in a nonconventional manner to reduce errors in measuring the relative position and orientation of a moving object, which provided a technological improvement in the accuracy with which inertial sensors measure the object); *XY*, 968 F.3d at 1331-32 (claims "include[d] a detailed recitation of the means" of operating a flow cytometry apparatus to sort individual particles in the same sample in real time, providing a technological improvement in the accuracy of highly pure particle separation of similar particles); *CardioNet*, 955 F.3d at 1368-70 (claims "focus[ed] on a specific means or method" and provided "a specific technological improvement" by achieving "speedier, more accurate, and clinically significant detection" of atrial fibrillation or atrial flutter in a patient improved cardiac monitoring technology); *Ecoservices*, 830 F. App'x at 642-43, 643 n.5 (claims for systems for washing jet engines directed to "a specific combination of a type of washing unit, information detector, and control unit, configured in a certain way" provided technical

6. We have previously explained that *Diehr* preceded the evolution of the modern-day *Alice/Mayo* test, but at step one "the *Diehr* claims were directed to an improvement in the rubber curing process, not a mathematical formula." *Thales Visionix*, 850 F.3d at 1348, 1348 n.2 (Fed. Cir. 2017).

improvements such as a higher degree of quality of an engine washing procedure).

In contrast, the claims of the '719 patent do not recite any means of technical improvements to an existing process. While the '719 patent eliminates human error by automating the data transfer step, this type of improvement does not make the claims patent eligible. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) ("While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself."); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 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."). Indeed, "mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology." *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

Ficep also asserts that the extraction of intersection parameters from a CAD model allows for an automated manufacturing process that is different from prior methods because the claimed manufacturing machine marks the components rather than a human. Appellant's Br. 51-53. But claim 7 does not require marking a manufacturing component, and simply recites "manufactur[ing] the components" based at least in part on the transmitted

intersection parameters. *See* '719 patent at claim 7. Thus, Ficep's asserted distinction is not in the claim and therefore not relevant to our inquiry.

Accordingly, we conclude that the claims of the '719 patent are directed to an abstract idea.

II. *Alice*/*Mayo* Step Two

At step two, we agree with the district court the '719 patent claims do not contain an inventive concept. Beyond the abstract idea, claim 7 recites generic, conventional elements of a computing device, a programmable logic controller, a receiver, a database unit, a processor, a transmitter, and a manufacturing machine. '719 patent at claim 7. "An inventive concept . . . cannot simply be an instruction to implement or apply the abstract idea on a computer." *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). Further, the recited generic manufacturing machine that manufactures the component based on received data is no different than the conventional machine and, in the context of this claim, is merely post-solution activity. *Diehr*, 450 U.S. at 191-92 ("[I]nsignificant post-solution activity will not transform an unpatentable principle into a patentable process"). Thus, the additional elements in the claims do not provide an inventive concept.

Ficep contends that identifying intersection parameters from a CAD model was unconventional and thus establishes an inventive concept. Appellant's Br. 54-55 (citing J.A. 780-82 ¶¶ 15-16; J.A. 838-840 ¶¶ 6-9). We

disagree. As we explained above, adding data to a CAD model and then identifying that data is an abstract idea. Moreover, neither the claims nor the specification explain the process for obtaining the intersection parameters from the design model and leave open the possibility that a human determines the intersection parameters and inputs this information into the design model—also an abstract idea. An abstract idea, however, "cannot supply the inventive concept that renders the invention 'significantly more' than that [abstract idea]." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

Ficep also argues that the claims move the location of the marking from the manual layout stations to the automated manufacturing line, which provides an inventive concept much like the claims in *BASCOM*. Appellant's Br. 55 (citing *BASCOM*, 827 F.3d at 1350). But the claims do not require marking, so this unclaimed feature cannot provide an inventive concept. *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1338 (Fed. Cir. 2017) ("To save a patent at step two, an inventive concept must be evident in the claims.").

Finally, Ficep relies on evidence of secondary considerations to show an inventive concept. Appellant's Br. 56-57. Questions of nonobviousness such as secondary considerations, however, are irrelevant when considering eligibility. *See SAP*, 898 F.3d at 1163 (explaining that it is not "enough for subject-matter eligibility that claimed techniques be novel and nonobvious in light of prior art, passing muster under 35 U.S.C. §§ 102 and 103."); *Intell.*

Ventures I LLC v. Symantec Corp., 838 F.3d at 1315 ("While the claims may not have been anticipated or obvious . . . that does not suggest that the idea . . . is not abstract, much less that its implementation is not routine and conventional.").

In sum, the claims of the '719 patent lack an inventive concept.

Conclusion

We have considered Ficep's remaining arguments and find them unpersuasive. For the foregoing reasons, we affirm.

AFFIRMED

APPENDIX B — MEMORANDUM OPINION OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE, FILED FEBRUARY 28, 2022

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

Civil Action No. 19-1994-RGA

FICEP CORPORATION,

Plaintiff,

v.

PEDDINGHAUS CORPORATION,

Defendant.

February 28, 2022, Decided;
February 28, 2022, Filed

MEMORANDUM OPINION

/s/ Richard G. Andrews

ANDREWS, U.S. DISTRICT JUDGE:

Before me is Defendant's Motion for Summary Judgment of Unpatentability Under 35 U.S.C. § 101. (D.I. 49). I have reviewed the parties' briefing (D.I. 50, 53, 58), and I heard oral argument on February 17, 2022. (References to the transcript of the oral argument are

indicated by "Tr."). For the reasons that follow, I will GRANT this motion.

I. BACKGROUND

In its First Amended Complaint (D.I. 13), Plaintiff Ficep Corporation alleges that Defendant Peddinghaus Corporation infringes one or more claims of U.S. Patent No. 7,974,719 ("the '719 patent"). Ficep and Peddinghaus are competitors in the production of steel fabrication machinery, which can be used to manufacture large steel beams for use in construction projects. (D.I. 13 at ¶¶ 6, 9; '719 patent, 3:62-4:7). The '719 patent is entitled "Method and an Apparatus for Automatic Manufacture of an Object with Multiple Intersecting Components." It generally relates to "systems and methods for automatic manufacture of an object based on automatic transmission of a three-dimensional rendering of the object, such as a rendering from a CAD to an assembly line for manufacture." ('719 patent, 1:9-13).

Peddinghaus filed a motion to dismiss the First Amended Complaint for lack of patent eligible subject matter. (D.I. 15). The Magistrate Judge issued a Report & Recommendation recommending that I deny the motion because there were factual disputes as to whether the claims recited an inventive concept. (D.I. 30). I did not rule on the merits as to any objections to the Report & Recommendation, but I did adopt its conclusion that I deny the motion to dismiss. (D.I. 33 at 2). I suggested an early summary judgment motion on the patent eligibility issue would be appropriate. (*Id.*). Peddinghaus later filed the

present motion for summary judgment of unpatentability. (D.I. 49).

II. LEGAL STANDARDS

A. Summary Judgment

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). Material facts are those "that could affect the outcome" of the proceeding. *Lamont v. New Jersey*, 637 F.3d 177, 181 (3d Cir. 2011) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S. Ct. 2505, 91 L. Ed. 2d 202 (1986)). "[A] dispute about a material fact is 'genuine' if the evidence is sufficient to permit a reasonable jury to return a verdict for the nonmoving party." *Id.* The burden on the moving party may be discharged by pointing out to the district court that there is an absence of evidence supporting the non-moving party's case. *Celotex Corp. v. Catrett*, 477 U.S. 317,323, 106 S. Ct. 2548, 91 L. Ed. 2d 265(1986).

The burden then shifts to the non-movant to demonstrate the existence of a genuine issue for trial. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87, 106 S. Ct. 1348, 89 L. Ed. 2d 538 (1986); *Williams v. Borough of West Chester*, 891 F.2d 458, 460-61 (3d Cir. 1989). A non-moving party asserting that a fact is genuinely disputed must support such an assertion by: "(A) citing to particular parts of materials in the record, including depositions, documents, electronically stored

information, affidavits or declarations, stipulations ..., admissions, interrogatory answers, or other materials; or (B) showing that the materials cited [by the opposing party] do not establish the absence ... of a genuine dispute ...." Fed. R. Civ. P. 56(c)(1). The non-moving party's evidence "must amount to more than a scintilla, but may amount to less (in the evaluation of the court) than a preponderance." *Williams*, 891 F.2d at 461.

When determining whether a genuine issue of material fact exists, the court must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in that party's favor. *Wishkin v. Potter*, 476 F.3d 180, 184 (3d Cir. 2007). If the non-moving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *See Celotex Corp.*, 477 U.S. at 322.

B. Patent-Eligible Subject Matter

Section 101 of the Patent Act defines patent-eligible subject matter. It provides: "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 requirements of this title." 35 U.S.C. § 101. The Supreme Court recognizes three categories of subject matter that are not eligible for patents—laws of nature, natural phenomena, and abstract ideas. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216, 134 S. Ct. 2347, 189 L. Ed. 2d 296 (2014). The purpose of these exceptions is

to protect the "basic tools of scientific and technological work." *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71, 132 S. Ct. 1289, 182 L. Ed. 2d 321 (2012).

In *Alice*, the Supreme Court reaffirmed the framework laid out in *Mayo* "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 573 U.S. at 217. First, the court must determine whether the claims are drawn to a patent-ineligible concept. *Id.* If the answer is yes, the court must look to "the elements of the claim both individually and as an ordered combination" to see if there is 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 217-18 (cleaned up).

"While the ultimate determination of eligibility under § 101 is a question of law,. . . there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination." *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018).

III. DISCUSSION

A. Representative Claim

A court may treat a claim as representative where all claims are "substantially similar and linked to the same abstract idea." *Content Extraction & Transmission LLC*

v. Wells Fargo Bank, N.A., 776 F.3d 1343, 1348 (Fed. Cir. 2014). Peddinghaus argues that claim 7 is representative of all claims of the '719 patent. (D.I. 50 at 3 & n.l). Ficep disagrees. (D.I. 53 at 25).

Claims 1, 7, and 14 are the only independent claims in the '719 patent. These claims are written as method, apparatus, and article of manufacture claims, respectively, but recite substantially the same limitations, including: (1) creating a design model of an object having multiple individual components defining an intersection at which the two components are in contact with one another; (2) identifying and extracting component dimensions, intersection parameters, and manufacturing parameters from the design file; (3) transmitting that information to the manufacturing machine; and (4) manufacturing components, using the manufacturing machine, based at least in part on the transmitted component dimensions, intersection parameters, and manufacturing parameters. (*See* '719 patent, claims 1, 7, and 14). Thus, I agree with Peddinghaus that claim 7 is representative of the independent claims of the '719 patent.

Peddinghaus further argues that claim 7 is representative of the dependent claims because they do not include limitations that would alter the § 101 analysis. (D.I. 50 at 3 n.l & 16 n.6). Specifically, Peddinghaus contends,

> Claims 8, 9, and 13 recite further generic computer components such as a "data storage unit," a "monitor," and a "wireless connection" over which the transmitter can send data. Claim

> 10 adds that an object is assembled from the manufactured components, as it would be in any prior art manufacturing method. Claims 11 and 12 merely describe generic aspects of the design model, all of which the specification acknowledges are in the prior art. Claims 2-6 are directed to similar subject matter, but in the context of method claim 1.

(*Id.* at 16 n.6) (internal citations omitted).

In response, Ficep argues that the limitations in claims 4 and 10 (assembly of the object) and claim 13 (wireless connection) further tie the claims to "the physical world and manufacturing process." (D.I. 53 at 25). I agree with Peddinghaus that the limitations in the dependent claims do not alter the § 101 analysis. The dependent claims merely add generic components and limitations that are conventional and uninventive.

Because all the independent claims recite the same concept and the dependent claims offer only minor, non-technical limitations, I will consider claim 7 as representative. *See Content Extraction*, 776 F.3d at 1348; *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) ("[C]ourts may treat a claim as representative ... if the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim.").

Representative claim 7 recites:

Appendix B

7. An apparatus for automatic manufacture of an object, comprising:

a computing device adapted to create a design model of an object having multiple individual components, at least two of the individual components defining an intersection at which the two components are in contact with one another;

at least one programmable logic controller in communication with the computing device and with at least one manufacturing machine;

a receiver associated with the programmable logic controller for receiving the design model of the object;

a database unit adapted to store the design model received at the receiver;

a processor which is associated with the programmable logic controller and extracts from the design model a plurality of dimensions of components which define a plurality of components of the object;

wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components;

> wherein the processor extracts from the design model the intersection parameters;
>
> a transmitter associated with the processor for transmitting the intersection and machining parameters and the component dimensions from the programmable logic controller to the at least one manufacturing machine; and
>
> wherein the at least one manufacturing machine manufactures the components based at least in part on the transmitted component dimensions and on the transmitted intersection and manufacturing parameters.

('719 patent, 8:25-55).

B. *Alice* Step One

First, I must determine whether claim 7 as a whole is directed to an abstract idea. *Alice*, 573 U.S. at 218. "The 'abstract ideas' category embodies 'the longstanding rule that an idea of itself is not patentable.'" *Id.* (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972)). "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, 1334 (Fed. Cir. 2016). The Supreme Court has recognized, however, that "fundamental economic practice[s]," *Bilski*, 561 U.S. at 611, "method[s] of organizing human activity," *Alice*, 573 U.S. at 220, and mathematical algorithms,

Benson, 409 U.S. at 64, are abstract ideas. In navigating the parameters of such categories, courts have generally sought to "compare claims at issue to those claims already found to be directed to an abstract idea in previous cases." *Enfish*, 822 F.3d at 1334.

In determining whether claims are directed to an abstract idea, the court should look to whether the claims "focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (citing *Enfish*, 822 F.3d at 1336). The Federal Circuit further instructs district courts to "approach the Step 1 directed to inquiry by asking what the patent asserts to be the focus of the claimed advance over the prior art. In conducting that inquiry, we must focus on the language of the asserted claims themselves, considered in light of the specification." *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020) (cleaned up).

Peddinghaus argues that representative claim 7 is directed to the abstract idea of "identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object." (D.I. 50 at 10). Peddinghaus asserts that the claims take a prior art process which has been manually performed by humans and simply add "generic computer components to reduce human error and increase efficiency." (*Id.* at 10). Ficep argues that the '719 patent is valid under Step One because (1) the claims are directed to a real-world system as in *Diehr*, and (2)

the claims are directed to a technological improvement. (D.I. 53 at 8-17).

In *Diamond v. Diehr*, the Supreme Court held that the claimed process for curing rubber, which included a step where a computer performed calculations using a well-known mathematical equation, was patent eligible. 450 U.S. 175, 184-87, 193, 101 S. Ct. 1048, 67 L. Ed. 2d 155 (1981). Ficep argues that, much like the claims in *Diehr*, "the claims in the '719 patent use computers that perform computations as part of a process for using a physical machine to manufacture physical components." (D.I. 53 at 10). The claims in *Diehr*, however, "describe[d] in detail a step-by-step method" for accomplishing an improved physical process. *Diehr*, 450 U.S. at 184; *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1348 (Fed. Cir. 2017) ("In terms of the modern day *Alice* test, the *Diehr* claims were directed to an improvement in the rubber curing process, not a mathematical formula.").[1]

1. The recent Federal Circuit cases cited by Ficep similarly claim specific technological improvements, specific solutions, or "describe in detail a step-by-step method for accomplishing a physical process." *XY, LLC v. Trans Ova Genetics, LC*, 968 F.3d 1323, 1331 (Fed. Cir. 2020); *see also EcoServices, LLC v. Certified Aviation Serv., LLC*, 830 Fed. Appx. 634, 642 (Fed. Cir. 2020) (finding that "the claims of the '262 patent do not recite the mere desired result of automated jet engine washing, but rather, recite a specific solution for accomplishing that goal"); *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1368 (Fed. Cir. 2020) (finding that the claims '"focus on a specific means or method that improves' cardiac monitoring technology; they are not 'directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery'" (quoting *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016))).

In contrast, the '719 patent does not recite any specific technological improvement to manufacturing. The "Background of the Invention" section of the patent specification explains, "Computer-aided design (CAD) programs and systems may be used to design detailed three-dimensional models of physical objects, such as structural or mechanical parts of a structure or device." ('719 patent, 1:14-17). A CAD model generally includes design specifications such as "welding characteristics, names of parts and components, [and] dimensional references for squaring." (*Id.*, 1:20-25). "In order to complete the manufacturing process of a structure or device based on a [CAD] model, a human operator typically must program manually the manufacturing machines associated with an assembly line based on the [CAD] display." (*Id.*, 1:26-30). To do this, a human operator would first review the CAD information and then input the CAD specifications into the automated assembly line apparatus. (*Id.*, 1:32-41).

The specification explains that there are two problems with this prior art process: the operator might be unavailable or might make a mistake when inputting the information into the manufacturing machine. (*Id.*, 1:41-43, 53-55). The claimed invention aims to solve these problems and increase efficiency by automatically providing the design parameters to the manufacturing machine. (*Id.*, 1:44-49, 55-58).

The claims, however, describe only in general terms how one may receive, store, extract, identify, and transmit the parameters to a manufacturing machine using generic

computer technology. I believe the language of the claims crosses the line into directing the patent to the abstract idea itself as a solution to potential human error or operator absence.

The Federal Circuit's decision in *University of Florida* is instructive. In that case, the patent claimed a method and system for integrating physiologic treatment data by obtaining treatment data from multiple bedside machines, converting that data to a "machine independent format," and displaying the results on a user interface. *Univ. of Fla. Rsch. Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1366 (Fed. Cir. 2019). The Federal Circuit held that the claims were directed to the abstract idea of collecting, analyzing, manipulating, and displaying data. *Id.* at 1368. The Court held that the patent at issue was unpatentable because it simply sought to automate the prior art "'pen and paper methodologies' to conserve human resources and minimize errors" and failed to recite any specific improvement to the way computers operate. *Id.* at 1367. The Court further reasoned that the claims failed to provide any technical details for the tangible components and failed to recite how these components performed the conversion of data. *Id.* at 1368. The '719 patent similarly seeks to simply automate the prior art methods to minimize human error and fails to recite any specific technological improvement to manufacturing or computer technology.

Ficep argues that the claims as a whole are directed to improved manufacturing systems. (D.I. 53 at 11). Specifically, Ficep contends that the computer in the '719 patent identifies intersection parameters differently than

how human operators would do so in the prior art. (*Id.* at 15). Ficep's expert Tim Chipman, a software developer, explains that prior to the '719 patent, if a company wanted to manufacture components of an intersecting structure, a human operator would need to analyze 2D drawings to find the intersection parameters. (D.I. 54 at ¶ 24). To do this, the operator would print out the 2D drawing and "would typically use a tape measure and a marker ... to mark the intersection lines on the components." (*Id.*). Mr. Chipman asserts that scribing machines, such as those disclosed in the patent, were not "conventional in 2006," but even if they "existed at that time," an operator would have "to manually program those intersection parameters into the machine." (*Id.* at ¶ 16).

The '719 patent automates this process by having a computer identify the intersection parameters instead of a human operator. Mr. Chipman contends that the computer performs this task differently than what was done by hand. (*Id.* at ¶17). He explains, "a likely way to identify intersection parameters would be an iterative process in which for each component of the object, it is compared with every other component of the object, to assess whether they intersect, using certain information about each component such as its type and dimensions. Then, only after determining that two components do intersect are the intersection parameters (e.g., lines/contours) created that define the intersection of the two components." (*Id.*).

The '719 patent specification, however, does not explain how the claimed invention identifies the intersection parameters. More importantly, the claims contain no

restrictions on how the processor identifies[2] the intersection parameters, or how the other computerized steps are performed. (*See, e.g.*, '719 patent, claim 7). Instead, the claims essentially recite a "black box" processor that replaces the human operator in an unspecified manner. *See, e.g., Dropbox, Inc. v. Synchronoss Techs., Inc.*, 815 F. App'x 529, 533 (Fed. Cir. 2020) (holding that a claim was abstract because the specification treated the claimed tangible "access checker" as a "black box" and "functional abstraction" that failed "to describe how to solve the problem" the patentee argued it addressed); *id.* at 536-37 (holding that a claim was "abstract because it recited essentially the same process as a person manually

2. Ficep argues that this Court must construe the term "identifying" before considering summary judgment under § 101. (D.I. 53 at 22-23). In the Joint Claim Construction Chart, Ficep proposes construing "identifying a plurality of intersection and manufacturing parameters" as "identifying, without human intervention, a plurality of intersection and manufacturing parameters." (D.I. 69-1, Ex. A at 1). Peddinghaus proposes construing this term as "locating two or more intersection [and manufacturing parameters] in the design model." (*Id.*). Even if I were to adopt Ficep's proposed construction, the claim still fails to be directed to an improved manufacturing system because the claim still does not address how the invention identifies the intersection parameters. (*See, e.g.*, D.I. 30 at 16 (Report & Recommendation) ("[C]laim construction might be needed before a final call can be made on this Section 101 issue. That is, the Section 101 calculus could turn on exactly what the claim's reference to 'identifying] a plurality of intersection parameters' requires, and, from there, on how that process differs (if at all) from how a human calculated those parameters manually in working with prior art systems and processes.")); *Content Extraction*, 776 F.3d at 1349 (finding that claims were patent-ineligible even when construed in the manner most favorable to Plaintiff).

transferring data from one mobile device to another, with the person herself acting as the 'server'" and "fail[ed] to provide specific explanations or technical details describing how it improves the functionality of the generic components").

Ficep also argues that the '719 patent is patentable because it is directed to a real-world system that manufactures real-world objects. (D.I. 53 at 8-13; Tr. at 4:11-19). While claim 7 recites tangible components such as a "computing device," a "programmable logic controller," and a "manufacturing machine," the specification makes clear that the recited physical components merely provide a generic environment in which to carry out the abstract idea. The specification and claims do not describe a new or specialized computing device, programmable logic controller, or manufacturing machine. The specification instead refers to these components in generic terms. (*See, e.g.*, '719 patent, 6:4-8 ("The manufacturing machine 235 is a machine, such as a machine which forms a part of an assembly line, which assembles, marks out and/or welds, builds or creates all or part of the object to be manufactured or a component of the object.")).

The improvements described in the specification appear to originate exclusively with the removal of human operators, achieved via the abstract idea. (*See, e.g., id.*, 1:55-58, 5:26-30). The claimed physical components are thus merely "conduitfs] for the abstract idea" and do not save the claims. *See, e.g., Yu v. Apple, Inc.*, 1 F.4th 1040, 1043-45, 1044 n.2 (Fed. Cir. 2021) (holding that claims directed to an "improved digital camera" were unpatentable because the

claims recited "[o]nly conventional camera components" performing the abstract idea of taking two pictures and using one picture to enhance the other picture in some way); *In re TLI Commc'ns LLC Pat. Litig*, 823 F.3d 607, 612 (Fed. Cir. 2016) (concluding that the claimed tangible components were merely "conduitfs] for the abstract idea" partly because "[t]he specification fail fed] to provide any technical details for the tangible components, but instead predominately describe[d] the system and methods in purely functional terms").

Further, the claim limitation requiring the manufacture of components amounts to no more than conventional post-solution activity and thus does not change the § 101 analysis. *Diamond v. Diehr*, 450 U.S. 175, 191-92, 101 S. Ct. 1048, 67 L. Ed. 2d 155 (1981) ("[I] nsignificant post-solution activity will not transform an unpatentable principle into a patentable process."); *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1290 (Fed. Cir. 2020) (holding that a method of manufacturing claim was unpatentable), *petition for cert, filed*, No. 20-891 (Dec. 28, 2020).

Given the claim language and the specification, I conclude that claim 7 is directed to the abstract idea of identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object. Thus, I proceed to *Alice* Step Two.

C. *Alice* Step Two

Having decided that the claims are directed to an abstract idea, I must next "examine the limitations of

the claims to determine whether the claims contain an 'inventive concept' to 'transform' the claimed abstract idea into patent-eligible subject matter." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (quoting *Alice*, 573 U.S. at 221). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 77) (alterations in original). Those "additional features" must be more than "well-understood, routine, conventional activity." *Ultramercial*, 772 F.3d at 715 (quoting *Mayo*, 566 U.S. at 79-80). "Whether the claim elements or the claimed combination are well-understood, routine, conventional is a question of fact." *Aatrix*, 882 F.3d at 1128.

Neither "[a] simple instruction to apply an abstract idea on a computer," nor "claiming the improved speed or efficiency inherent with applying the abstract idea on a computer" satisfies the requirement of an "inventive concept." *Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015). "To salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not." *Bancorp Servs., L.L.C v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012).

Ficep and its expert argue that the claimed invention is inventive because it uses a computer to identify intersection parameters differently than how the human operator did so in the prior art, and in a way that could

not be done by hand. (D.I. 54 at ¶¶ 17, 24). I accept Mr. Chipman's declaration that a computer identifies the intersection parameters differently than how a human would do so. But this limitation is not in the claims. *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1338 (Fed. Cir. 2017) ("To save a patent at step two, an inventive concept must be evident in the claims."). Thus, I find that Mr. Chipman's declaration does not create a genuine issue of material fact as to inventiveness. *See, e.g., Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1326 (Fed. Cir. 2016) (concluding that expert opinion about problems solved by the claimed invention did not create a genuine issue of material fact when "the claims do not actually contain" the purported inventive concept).

Ficep also argues that it was not conventional to manufacture a component based on its intersection with a different component. (D.I. 53 at 4-5; Tr. at 42:11-19). But Ficep's expert directly contradicts this attorney argument. He explains that it was common for human operators to identify the intersection parameters by hand and manually mark the intersections on the steel components.[3] (D.I. 54

3. Ficep has repeatedly stated that "marking" a component is one way to "manufacture" it based on intersection parameters. (*See* D.I. 53 at 3 ("The '719 patent explains that an example of such manufacturing of components based on intersection parameters includes using those automatically identified parameters to mark (e.g., scribe) lines onto the steel components that indicate where one steel component is supposed to connect to another steel component."); *id.* at 20 n.4 ("Layout marking by a machine is an example of the steps of 'manufacturing] the components based at least in part... on the transmitted intersection ... parameters.'"); *see also id.* at 4, 24).

at ¶ 16). The only purported advance over the prior art is that now the machine, not the human, marks the steel beams with the intersections. (*See* '719 patent, 1:55-58; D.I. 53 at 18, 20). The claims are not directed to any improved or specialized "manufacturing machine," and fail to recite how the machine manufactures components based on intersection parameters. Instead, the claimed "manufacturing machine" is defined as a generic "machine which forms a part of an assembly line, which assembles, marks out and/or welds, builds or creates all or part of the object to be manufactured or a component of the object." ('719 patent, 6:5-8). Thus, the claimed machine is no more than a "black box" which replaces the human operator and automatically performs the marking. *See Dropbox*, 815 F. App'x at 533. Simply replacing the human operator with a conventional machine is not an inventive concept and is not sufficient to transform the claims into patent-eligible subject matter. *See Content Extraction*, 776 F.3d at 1348.

The '719 patent specification makes clear that the main advantage of the patent comes from automating the processes previously performed by human operators, resulting in more accuracy and efficiency. (*See, e.g.*, '719 patent, 1:37-58, 5:26-30). Merely automating a process, however, is not an inventive concept. *See, e.g., OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) ("[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.").[4]

4. Ficep also argues that the '719 patent's "real-world ramifications"—e.g., immediate industry recognition, copying by others, commercial success, and licensing of the patent—support

The '719 patent's generic and "black box"-type claiming also raises serious concerns of preemption. The broad claims here would preclude many, if not all, uses of a computer to identify, extract, and transfer intersection information from design models for use in manufacturing a multi-component object.

Thus, I conclude that the '719 patent claims fail under *Alice* Step Two. Ficep's attempts to raise factual disputes about whether the claimed processes were "well-understood, routine, [and] conventional" (D.I. 53 at 17-21) do not obviate the fact that the claims lack a

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a finding of inventiveness. (D.I. 53 at 19-21). However, I do not think it is appropriate to consider secondary considerations of nonobviousness in determining patentability under § 101. *See WhitServe LLC v. Dropbox, Inc.*, 854 F. App'x 367, 373 (Fed. Cir. 2021) (non-precedential) ("Objecti[ve] indicia of nonobviousness are relevant in a § 103 inquiry, but not in a § 101 inquiry."), *cert, denied*, 142 S. Ct. 778, 211 L. Ed. 2d 486, 2022 WL 89391 (U.S. 2022); *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017) ("Eligibility and novelty are separate inquiries."). Even if I were to consider this extrinsic evidence, I do not think it creates a genuine issue of material fact as to whether the claims recite an "inventive concept." For example, the article praising Ficep's "breakthrough" seems to focus on the increased efficiency and accuracy from the automation of scribing as the main benefit of the invention. (*See* D.I. 53, Ex. 1 ("The automation solution eliminates errors, hastens the process, and at the same time copes with the declining number of highly skilled fitters. It's no stretch to see how automated marking offers a significant upgrade over manual operations; even the best layout person is prone to make a measuring mistake or have his marking misinterpreted.")). But, again, simply automating a process, and thereby obtaining the significant benefits that come from automation, does not provide an inventive concept.

"specific, discrete implementation of the abstract idea." *Dropbox*, 815 F. App'x at 534 (quoting *BASCOM Glob. Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016)). The claims' high level of generality is not supplemented with any detail or additional features that exceed simply reciting the abstract idea. *Content Extraction*, 776 F.3d at 1347. I therefore conclude that the claims of the '719 patent are ineligible under § 101.

IV. CONCLUSION

An appropriate order will issue.

APPENDIX C — MEMORANDUM ORDER OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE, FILED MARCH 16, 2021

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

Civil Action No. 19-cv-1994-RGA

FICEP CORPORATION,

Plaintiff,

v.

PEDDINGHAUS CORPORATION,

Defendant.

MEMORANDUM ORDER

The Magistrate Judge filed a Report and Recommendation (D.I. 30) on Defendant's motion to dismiss (D.I. 15). Before me are Defendant Peddinghaus' Objections (D.I. 31) to the Report's recommendation that I deny the motion. Plaintiff Ficep has filed a Response. (D.I. 32).

I. BACKGROUND

In its motion to dismiss Ficep's First Amended Complaint, Peddinghaus asserted that Patent No. 7,974,719 (the '719 Patent) was directed to patent-ineligible

subject-matter under 35 U.S.C. § 101. (D.I. 30 at 2). The Report and Recommendation recommended denying Peddinghaus' motion. (*Id*. at 1). The Report sets forth the relevant facts and law, and I will not repeat them here. I review the objections *de novo*. 28 U.S.C. § 636(b)(1).

II. DISCUSSION

A. *Alice* Step One

After about eight pages of analysis, the Report assumed for the sake of argument that claim 7[1] of the '719 Patent was directed to what it assumed was an abstract idea, specifically, "identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object." (D.I. 30 at 7-8, 12). Peddinghaus treats the Report's assumption as a finding. (D.I. 31 at 1). Thus, Peddinghaus does not address the Report's lack of a conclusion on "directed to an abstract idea" as an obstacle to be overcome in its Objections. Nor did Ficep file a separate Objection to the Report's lack of a conclusion that the patent is not directed to an abstract idea. Ficep did object to the Report's assumption under *Alice* step one in its Response (which is not the place to be making such an objection). (D.I. 32 at 7-10).

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1. Peddinghaus has repeatedly asserted that claim 7 is representative for purposes of the eligibility analysis. (D.I. 30 at 3; D.I. 31 at 2). The Report considered Peddinghaus' motion focusing on claim 7. (D.I. 30 at 3). Ficep did not object to the use of claim 7 as representative in its Response. (D.I. 32).

Appendix C

No one has timely objected to the Magistrate Judge not resolving the "directed to an abstract idea" decision. Without a finding that the patent is directed to an abstract idea, I cannot grant the motion to dismiss.

In my opinion, there is a serious question of patent eligibility. Thus, after Peddinghaus answers the complaint, I think the parties ought to meet and confer and consider coming up with a schedule for an early summary judgment motion on the patent eligibility issue.

III. CONCLUSION

For the reasons stated above,.

IT IS HEREBY ORDERED this 16th day of March 2021:

1. Defendant's Objections (D.I. 31) to "inventive concept" are **DISMISSED** as moot;

2. Plaintiff's Response (D.I. 32) as to the "directed to an abstract idea" is **DENIED** as untimely;

3. The Report & Recommendation's Recommendation as to disposition is **ADOPTED**; and

4. Defendant's Motion to Dismiss for Failure to State a Claim (D.I. 15) is **DENIED**.

/s/ Richard G. Andrews
United States District Judge

APPENDIX D — REPORT AND RECOMMENDATION OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE, FILED JANUARY 26, 2021

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

Civil Action No. 19-1994-RGA

FICEP CORPORATION,

Plaintiff,

v.

PEDDINGHAUS CORPORATION,

Defendant.

January 26, 2021, Decided
January 26, 2021, Filed

REPORT AND RECOMMENDATION

In this patent action filed by Plaintiff Ficep Corporation ("Ficep" or "Plaintiff") against Defendant Peddinghaus Corporation ("Peddinghaus" or "Defendant"), presently pending before the Court is Peddinghaus's motion to dismiss Ficep's operative First Amended Complaint ("FAC"), filed pursuant to Federal Rule of Civil Procedure 12(b)(6) (the "Motion"). (D.I. 15) For the reasons set forth below, the Court recommends that the Motion be DENIED.

Appendix D

I. BACKGROUND

A. Factual Background

In the FAC, Ficep accuses Peddinghaus's CNC ("computer numerical control") machine products and predecessors thereto, as well as third party 3D modeling software and Peddinghaus's Raptor software (and predecessor software) that is used with Peddinghaus's CNC machines, of infringing at least claims 1, 7 and 14 of Ficep's United States Patent No. 7,974,719 (the "'719 patent"). (D.I. 13 (hereinafter, "FAC") at ¶¶ 9-38) The '719 patent is entitled "Method and an Apparatus for Automatic Manufacture of an Object with Multiple Intersecting Components," and generally speaking, it relates to systems and methods for the manufacture of construction components. (*Id.* at ¶ 6 & ex. A)[1]

Further relevant facts related to resolution of the Motion will be set out as needed in Section III.

B. Procedural Background

Ficep filed the instant action on October 21, 2019, (D.I. 1), and the FAC on June 18, 2020, (D.I. 13). The instant Motion was filed on July 9, 2020. (D.I. 15) United States District Judge Richard G. Andrews referred the Motion to the Court for resolution on August 17, 2020. (D.I. 22) Briefing on the Motion was completed on August

1. The '719 patent is attached as Exhibit A to the FAC. Further citations will simply be to the "'719 patent."

13, 2020, (D.I. 20), and the Court held a hearing on the Motion via videoconference on December 3, 2020, (D.I. 28 (hereinafter, "Tr.")).

II. LEGAL STANDARD

With the instant Motion, Peddinghaus asserts that the claims of the '719 patent are directed to patent-ineligible subject matter, pursuant to 35 U.S.C. § 101 ("Section 101"). The Court has often set out the relevant legal standards for review of such a motion, including in *Genedics, LLC v. Meta Co.*, 2018 U.S. Dist. LEXIS 141495, 2018 WL 3991474, at *2-5 (D. Del. 2018). The Court hereby incorporates by reference its discussion in *Genedics* of these legal standards and will follow those standards herein. To the extent consideration of Peddinghaus's Motion necessitates discussion of other, related legal principles, the Court will set out those principles in Section III below.

III. DISCUSSION

With its Motion, Peddinghaus asserts that claim 7 of the '719 patent is representative for Section 101 purposes. (D.I. 16 at 3; D.I. 20 at 3-4) Thus, the Court will focus below on claim 7, understanding that if the Motion is not well taken as to that claim, the Motion will also not be successful as to the remaining asserted claims in the case. Claim 7 recites the following:

> **7**. An apparatus for automatic manufacture of an object, comprising:

a computing device adapted to create a design model of an object having multiple individual components, at least two of the individual components defining an intersection at which the two components are in contact with one another;

at least one programmable logic controller in communication with the computing device and with at least one manufacturing machine;

a receiver associated with the programmable logic controller for receiving the design model of the object;

a database unit adapted to store the design model received at the receiver;

a processor which is associated with the programmable logic controller and extracts from the design model a plurality of dimensions of components which define a plurality of components of the object;

wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components;

wherein the processor extracts from the design model the intersection parameters;

> a transmitter associated with the processor for transmitting the intersection and machining parameters and the component dimensions from the programmable logic controller to the at least one manufacturing machine; and
>
> wherein the at least one manufacturing machine manufactures the components based at least in part on the transmitted component dimensions and on the transmitted intersection and manufacturing parameters.

('719 patent, col. 8:25-55)

A. *Alice*'s Step One

Alice's step one asks whether the claim at issue is "directed to" an abstract idea. In order to assess this question, the United States Court of Appeals for the Federal Circuit has instructed that courts should look to whether the claim at issue "focus[es] on a specific means or method that improves the relevant technology or [is] instead directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1368 (Fed. Cir. 2020) (quoting *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016)); *see also EcoServs., LLC v. Certified Aviation Servs., LLC*, 830 F. App'x 634, 642 (Fed. Cir. 2020). An "abstract idea" is a "'disembodied' concept . . . a basic building block of human ingenuity, untethered from any real-world application." *CLS Bank Int'l v. Alice Corp.*

Pty. Ltd., 717 F.3d 1269, 1286 (Fed. Cir. 2013) (Lourie, J., concurring) (citation omitted).

The '719 patent claims systems and methods for the automatic manufacture of a physical object with multiple intersecting components. ('719 patent at Abstract & cols. 1:66-2:2) In light of that, as the Court approaches *Alice*'s step one, it is worth taking a step back to understand what relevant controlling law tells us about how such claims can survive that step.

On the one hand, if a claim simply takes an abstract idea (say, something that humans have done for a long time) and does nothing more than make use of a generic computer to perform the abstract idea faster or more accurately than a human could (the type of "conventional" function that any computer can make happen), then the claim is ineligible. *McRO*, 837 F.3d at 1314 (noting that "claims [that] simply use a computer as a tool to automate conventional activity" are patent ineligible); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015). That would be the type of "do it faster (or more accurately) on a computer" kind of claim that *Alice* and its progeny have warned against. After all, the eligibility analysis is focused on preemption concerns. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216, 134 S. Ct. 2347, 189 L. Ed. 2d 296 (2014) ("We have described the concern that drives [the Section 101 analysis] as one of pre-emption.") And according to the Supreme Court of the United States, with respect to the kind of claims described above, the "add" of the computer and its processing capability simply does not change the preemption calculus

in a material way. *Id.* at 223-25 (noting that 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" because "[g]iven the ubiquity of computers, . . . wholly generic computer implementation" or use of the computer to "perform generic computer functions" is not the type 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") (internal quotation marks and citations omitted). Put another way, if that type of claim, absent the addition of the computer, would have walled off anyone from being able to make/use/sell/offer for sale a system or method that amounts to an abstract idea, then even after the addition of the computer, the claim would have just about the same breadth.

But on the other hand, some inventions that "automate tasks that humans are capable of performing are patent eligible if properly claimed[.]" *McRO*, 837 F.3d at 1313; *see also, e.g.*, *EcoServs., LLC*, 830 F. App'x at 643 ("That the claimed system achieves automation of a task previously performed by humans, however, does not mean the claimed system is necessarily directed to an abstract idea."). In *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), for example, the Federal Circuit held that patents relating to the automation of part of a preexisting 3-D animation method were patent-eligible subject matter under Section 101, where the claims were focused on a "specific asserted improvement" in computer animation and there was "no evidence that the process previously used by animators is the same as the

process required by the claims." 837 F.3d at 1303, 1314; *see also, e.g.*, *Axcess Int'l, Inc. v. Genetec (USA) Inc.*, 375 F. Supp. 3d 533, 537 (D. Del. 2019) ("Methods with real-world impact, implemented on physical devices, are not rendered abstract merely by the ability of a human to achieve a similar result (e.g. keeping watch) via different means."). The way that the Court understands the law in this area is that in cases like *McRO*, the Federal Circuit has found claims patent eligible at step one not simply because those claims were *novel*—i.e., because they added the element of computer automation (a new element) to a prior human process that amounted to an abstract idea. Instead, the Court understands the cases to be saying that the more that a patent is claiming something that amounts to a *specific improvement* to computer technology, the greater the likelihood that we are dealing with claims directed to a *specific, particularized real-world application* of the purported abstract idea, not simply to the abstract idea itself.[2] Avoiding a Section 101

2. *See CardioNet, LLC*, 955 F.3d at 1366, 1368 (concluding at step one that the claims were not directed to the "abstract idea that atrial fibrillation and atrial flutter can be distinguished by focusing on the variability of the irregular heartbeat" but to "an improved cardiac monitoring device" because the claims' focus was "on a *specific* means or method that *improves* cardiac monitoring technology" and not to "a result or effect that itself is the abstract idea" and looking to the written description to aid in that conclusion) (internal quotation marks and citation omitted, emphasis added); *EcoServs., LLC*, 830 F. App'x at 642 (concluding at step one that the claims at issue were not directed to an abstract idea, because "the claims are directed to a *specific system* that *improves* jet engine washing [and not to] a 'result or effect that itself is the abstract idea' of, e.g., automated jet engine washing" and because the claims "do not recite the mere desired

rejection at step one, then, is not just about showing that your computer-automated claim is new or novel; it is also about showing that this newness or novelty helps explain why your claim more *specific, more distinct, more narrow or more particularized* than the asserted abstract idea itself (i.e., the thing that your opponent says the claim is really "directed to"). *CardioNet, LLC*, 955 F.3d at 1372 ("The analysis under Alice step one is whether the claims as a whole are 'directed to' an abstract idea, regardless of whether the prior art demonstrates that the idea or other aspects of the claim are known, unknown, conventional, unconventional, routine, or not routine."). That is why this type of Section 101 analysis (which is ultimately about abstractness vs. real world application) is different than a Section 102 or Section 103 analysis (which is ultimately about novelty vs. what was known, or about obviousness vs. nonobviousness).

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result of automated jet engine washing, but rather recite a *specific solution* for accomplishing that goal") (internal quotation marks omitted, emphasis added); *McRO*, 837 F.3d at 1313-15 (concluding the same at step one, the claims were not directed to the abstract idea of "automated rules-based use of morph targets and delta sets for lip-synchronized three-dimensional animation" because in the claims, the "computer . . . is employed to perform a *distinct* process to automate a task previously performed by humans" and the "claimed process uses a combined order of *specific* rules that renders information into a *specific* format that is then used and applied to create desired results" and the "*specific* structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip synchronization [as there was no showing that] the limits of the rules themselves are broad enough to cover all possible approaches") (internal quotation marks and citation omitted, emphasis added).

With all that said, the Court turns back to claim 7. According to Peddinghaus, this claim is directed to the abstract idea of "identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object[.]" (D.I. 16 at 7, 14; D.I. 20 at 4) Peddinghaus asserts that the claims merely take a known prior art process that had been manually performed by humans and then add "generic computer components[.]" (D.I. 16 at 7-8) In other words, Peddinghaus argues that the only claimed advance in claim 7 is that the steps of identifying and extracting design parameters from the design model and entering that information into the manufacturing machine—steps previously performed by a human—would now be performed automatically, in just the same way, by generic computing equipment. (*Id.* at 8-10; *see also* D.I. 20 at 6 ("[T]he '719 patent's specification and claims require only conventional computer equipment and manufacturing machines, and the claims encompass achieving the result by the same means used by human operators."); Tr. at 22-23, 78-80) To Peddinghaus, "[t]he only thing that the patent says is that the computer does [the asserted abstract idea embedded in the claims] faster [and] perhaps does it more accurately" than the "human operator" would. (Tr. at 79)

In assessing Peddinghaus' argument, the Court starts at the beginning of the step one inquiry, and asks: Is "identifying, extracting, and transferring data from a design file for the purpose of manufacturing an object" an abstract idea in the first place? Ficep does not claim that this is *not* an abstract idea. And so the Court will assume herein that it is, for purposes of resolving the

Motion. *Cf. Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1368 (Fed. Cir. 2019) ("We hold at *Alice* step one that representative claim 1 is directed to the abstract idea of 'collecting, analyzing, manipulating, and displaying data.'")

Next, the Court asks: Is claim 7 *directed to* this abstract idea? Before trying to answer that question, it is helpful to review the patent's "Background of the Invention" and "Objects of the Invention" sections, which are found in columns 1 and 2 of the patent specification.

The "Background of the Invention" section explains that computer-aided design ("CAD") programs and systems can be utilized to design three-dimensional models of physical objects, including structural or mechanical parts of a structure or device. ('719 patent, col. 1:14-17) CAD allows for the display of that three-dimensional scale model on a computer or for the printing of that model as a schematic diagram. (*Id.*, col. 1:17-20) A CAD model generally includes design specifications such as welding characteristics, names of parts and components and dimensional references for squaring. (*Id.*, col. 1:20-25)

The specification indicates that prior to the patented invention, in order to complete the manufacturing process of a structure or device based on a CAD model, a human operator typically had to manually program the manufacturing machines associated with an assembly line. (*Id.*, col. 1:26-30) To accomplish this, the human operator would first review the CAD information that was visually produced on the computer display, and then input the CAD

design specifications into the automated assembly line apparatus. (*Id.*, col. 1:32-41)

The specification then recognizes that there was a need to improve this process. (*Id.*, col. 1:43-49) One difficulty with the prior art process was that sometimes, when you needed the specialized human operator to be inputting data into the manufacturing machine, that person was simply unavailable. (*Id.*, col. 1:37-43) Thus, the inventors recognized that "there is a direct need to improve the way in which the design parameters for all the components of an object, for example positions, welding codes, references for squaring and so forth, are provided to a manufacturing machine, while maintaining compatibility with [CAD] programs." (*Id.*, col. 1:43-49) The specification then states: "[t]o increase efficiency, design parameters related to intersections and points of contact or connection between components that come into contact with other components are included as design parameters." (*Id.*, col. 1:49-53) And then the patent goes on to discuss another problem with prior art solutions: that sometimes, the human manually inputting the CAD information would make mistakes. The patent says that the inventors thus sought to eliminate the possibility of "operator error" when providing instructions to the manufacturing machine. (*Id.*, col. 1:53-55) The claimed "robust solution[,]" which enabled manual marking-out operations to be performed automatically, would "improve[] efficiency and accuracy and lower[] cost[s]" relating to manufacturing objects, "since manual marking-out operations can be performed automatically." (*Id.*, col. 1:55-58)

The "Objects of the Invention" section then follows up by explaining that: "the aim of the present invention is to overcome these and other problems by providing systems and methods related to automated manufacture of an object with multiple intersecting components. To increase efficiency and reduce cost, the systems and methods of the present invention may be based on information included as part of existing computer-aided designs." (*Id.*, cols. 1:66-2:5)

The Court now turns back to the step one analysis. One of Ficep's key arguments about why claim 7 is not directed to the abstract idea at issue is that there is something about the novelty of the invention (i.e., how the invention is different from the prior art process that involved humans) that also makes a difference at step one of the eligibility analysis. So what does Ficep say that is? Here, Ficep points primarily to the following claim limitation: "wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components" ("the identifying limitation" or the "identifying step"). Ficep argues that with this limitation, claim 7's apparatus "creat[es] new information about intersection parameters that was not included in the design model at the time" of the invention. (D.I. 19 at 8-9 & n.1 (emphasis added)) That is, Ficep argues that the programmable logic controller in claim 7 is "going to identify and extract [] information" about intersection parameters from the CAD files by "using calculations on a computer" in a manner different from how humans identified intersection parameters before the time of the invention. (Tr. at 44, 64; *see also* D.I. 19 at 2, 8-9 & n.1;

Tr. at 40, 43-48, 71-72; Ficep's Oral Argument Hearing Presentation, Slide 25)

As the Court will explain below, there is some support for Ficep's position in the record.[3] But although the parties largely address this issue in their briefs as part of a step one analysis, (*see, e.g.*, D.I. 16 at 9-10; D.I. 19 at 9-11; D.I. 20 at 7-8), in the Court's view, it is better assessed at step two. That is because "*Alice* step one presents a legal question that can be [and almost always is] answered based on the intrinsic evidence[,]" i.e., an analysis that "beg[ins] and end[s] with the patent itself[,]" including "the plain claim language, written description, and prosecution history[.]" *CardioNet, LLC*, 955 F.3d at 1372-73. In other words, if the Court were looking at this issue as a step one question, it would typically do the following:

(1) It would note that the abstract idea at issue is "identifying, extracting, and transferring

3. Below, the Court will explain why Ficep's position will ultimately prevail as to this Motion. But that is not to say that the "Background of the Invention" and "Objects of the Invention" sections of the patent do not provide Peddinghaus with good material to work with from a Section 101 perspective. Much of the content of columns 1 and 2 of the patent, summarized above, really *does* seem to read as if the patent is saying that its claims are focused on (1) taking a previously-existing human process (i.e., manually programming design parameters into manufacturing machines associated with an assembly line) and (2) simply automating that process via a computer, so that it can be done more accurately. (Tr. at 5-7) That said, as is set forth below in the Court's *Alice* step two analysis, there is an aspect of the claims (the identifying step's use of intersection parameters) that, at least for now, prompts the Court's recommendation that the Motion be denied.

data from a design file for the purpose of manufacturing an object";

(2) It would also note that Ficep's position is that the identifying step in claim 7 (i.e., "wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components") is meant to get to something that is more particularized than what is captured by the asserted abstract idea (i.e., "identifying . . . data");

(3) It would then have to assess whether the inclusion of that amount of asserted extra-abstract-idea particularity is enough to consider claim 7 to be "directed to" something other than the abstract idea;

(4) But in doing so, it would typically only be considering the patent's text or prosecution history, and it would be making a legal determination about what the "focus" of the claim really is;

(5) And in doing that, it would not typically be considering extrinsic evidence that might help demonstrate the import of this aspect of the identifying step.

Here, that kind of step one inquiry would be difficult for Ficep, in part because the '719 patent itself does not really have a lot to say about intersection parameters, nor about

why the identifying step in claim 7 helps demonstrate that the claim is not directed to an abstract idea. (Tr. at 48-49) Instead, some of Ficep's best evidence about the identifying step comes from outside the patent (i.e., from the FAC). Thus, the Court concludes that the issue is best addressed at step two.

Therefore, the Court will assume *arguendo* that claim 7 is directed to the abstract idea at issue, and move on to consider the eligibility question at step two. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) (recognizing that in some cases "involving computer-related claims, there may be close calls about how to characterize what the claims are directed to"; in such cases, "an analysis of whether there are arguably concrete improvements in the recited computer technology [may] take place under step two").

B. *Alice*'s Step Two

If a claim is directed to an abstract idea, then step two of the *Alice* framework requires a court to assess "[w]hat else is there in the claims" by considering 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." *Alice*, 573 U.S. at 217 (certain internal quotation marks and citations omitted). The Supreme Court describes step two as a search for an "inventive concept[.]" *Id.*; *see also Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). And with regard to computer-related claims, the Supreme Court has noted that if a patentee argues that an aspect of the claim amounts to

an inventive concept, but that aspect simply amounts to the use of "computer implementation" that is "purely conventional" or that amounts to invoking "the most basic functions of a computer" then this add will not serve the render the claim patent eligible. *Alice*, 573 U.S. at 222, 225.

As with step one, step two is focused on preemption, not novelty. Although the Supreme Court used the term "inventive concept" to describe what it is that helps a patentee survive step two, the search for an inventive concept is not about whether the claim element in question is new or unique. *See Affinity Labs. of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 n.3 (Fed. Cir. 2016). After all, an "inventive concept" is simply "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 (certain internal quotation marks and citations omitted). In the context of computer-focused claims, the addition of an element that simply requires a computer to work in its "conventional" manner (i.e., to speed up the processing of an abstract idea) cannot amount to an inventive concept. But the addition of elements that amount to the "unconventional" use of computer technology might be enough. That is because the inclusion of such elements might help demonstrate how the claim is *sufficiently particularized* so as to not to be, essentially, *a claim to the abstract idea itself. See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1306 (Fed. Cir. 2016) (finding that the claims recited an inventive concept where "they describe a specific, unconventional technological solution, narrowly drawn to withstand preemption concerns, to a technological problem"); *Fitbit, Inc. v. AliphCom*, 233

F. Supp. 3d 799, 812-13 (N.D. Cal. 2017) (rejecting the argument that adding the concept of "tapping" to claims cannot supply an inventive concept because tapping was known in the art, as that argument "conflates patent eligibility with novelty[,]" which are separate inquires, and finding that adding in tapping amounted to an inventive concept because "it transforms a more abstract device pairing process into something specific").

The Federal Circuit has also explained that the step two analysis may involve "disputes over underlying facts[,]" like whether a claim element or claimed combination is in fact "well-understood, routine and conventional to a skilled artisan at the time of the patent[.]" *Berkheimer*, 881 F.3d at 1369. Content that creates this type of fact dispute may be found in a plaintiff's complaint, so long as the complaint's allegations are not "wholly divorced from the claims or the specification[.]" *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1317 (Fed. Cir. 2019).

Having set out the law, the Court turns back to Ficep's key argument about the identifying step. Ficep relies heavily on allegations in the FAC in this regard. The FAC alleges that prior art systems or methods required a human to either "analyze and figure out intersection parameters [relevant to a CAD model] using two dimensional drawings and then [use] a tape measure to manually make marks on a component" or to "manually program manufacturing machines with the information, with the machines then using the intersection parameters to manufacture components based on those components[.]" (FAC at ¶ 42) It explains that in the latter process, "the human operator would have [] first examined two dimensional drawings

to analyze and identify the intersection parameters that would then be used by the human operator to manually program the manufacturing machines." (*Id.*; *see also* Tr. at 71) However, the FAC pleads that the claimed inventions identify intersection parameters "different[ly]" than a human would. (FAC at ¶ 42) That is because the claims "eliminated the need for a specialized human operator to perform such tasks" since the inventions "*automatically identif[y] the intersection parameters*, extract[] those . . . parameters [and] transmit[]" those parameters to the manufacturing machine. (*Id.* (emphasis added)) The FAC further alludes to this difference when it alleges that via the patent's claims "*certain intersection . . . parameters are automatically identified, rather than requiring any human to have to analyze such information and manually program it into a machine*, for example, and then based on those parameters, the components . . . are manufactured, including, for example, by using those automatically identified parameters to scribe lines onto the steel components that indicate where one steel component is supposed to connect to another steel component[.]" (*Id.* at ¶ 41 (emphasis added))[4]

4. The FAC also cites to an article praising the invention, which was published in November 2011 in Modern Steel Construction and is entitled "Automated Layout in Steel Fabrication." (FAC at ¶ 44 (quotation marks omitted)) Ficep's answering brief attaches the article as an exhibit. (D.I. 19, ex. A) In resolving motions to dismiss under Rule 12(b)(6), courts generally consider only the allegations in the complaint, exhibits attached to the complaint, matters of public record, and documents integral to or explicitly relied upon in the complaint. *See, e.g.*, *U.S. Express Lines, Ltd. v. Higgins*, 281 F.3d 383, 388 (3d Cir. 2002); *Pension Benefit Guar. Corp. v. White Consol. Indus., Inc.*, 998 F.2d 1192, 1196 (3d Cir.

These above-referenced allegations in the FAC do appear to align with (or at least do not conflict with) the content of the '719 patent. They bear at least some relation, for example, to the patent's statement that in the claimed inventions "design parameters related to intersections and points of contact or connection between components that come into contact with other components are included as design parameters[.]" ('719 patent, col. 1:49-53; *see also* Tr. at 45-47; *id.* at 49) They also bear some relation to claim 7, which includes the identifying step. ('719 patent, col. 8:43-45) And there does not seem to be anything in the patent that *contradicts* the FAC's allegations. So if the FAC's allegations are correct, and the claimed inventions do identify intersection parameters in a fundamentally different way than what a human was doing in the prior art, this could make a difference from a patent eligibility perspective.[5]

1993). Because this article is explicitly relied upon in the FAC, the Court may consider it here.

The article could be read as supporting the FAC's allegations, in that it opines that Ficep made a "big breakthrough" in "automated layout and marking" that "was related to the ability of Ficep machines to extract data from detailing software and import it directly to a machine for automated scribing." (D.I, 19, ex. A at 41) However, what is less clear is exactly what *was* the "big breakthrough." Did it have to do with the identifying step of the asserted patent? Did it amount to something more than merely using a computer to speed up a previously known human-performed process? This the article does not say.

5. *See, e.g.*, *Cellspin*, 927 F.3d at 1317-18 (explaining that "plausible and specific factual allegations that aspects of the claims are inventive are sufficient" and that "[a]s long as what makes the claims inventive is recited by the claims, the specification need

Admittedly, one difficulty for Ficep here is that, as Peddinghaus repeatedly notes, (D.I. 16 at 7-8, 11, 14, 19-20; D.I. 20 at 8-10; Tr. at 17, 25-26, 83), claim 7 does not say very much about *how* the programmable logic controller in claim 7 actually identifies intersection parameters. Had the claim included more particularized language about that "how," it might have made the Motion less of a close call. Yet to the Court, this simply indicates that claim construction might be needed before a final call can be made on this Section 101 issue. That is, the Section 101 calculus could turn on exactly what the claim's reference to "identif[ying] a plurality of intersection parameters" requires, and, from there, on how that process differs (if at all) from how a human calculated those parameters manually in working with prior art systems and processes. (Tr. at 65 (Ficep's counsel responding to the Court's question about what the claim language requires with regard to the identifying step by arguing that the answer might involve "a bunch of Markman arguments"); *id.* at 60, 67 (same); Ficep's Hearing Presentation, Slide 25)[6] The

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not expressly list all the reasons why this claimed structure is unconventional"); *Peloton Interactive, Inc. v. Echelon Fitness, LLC*, No. 19-cv-1903-RGA, 2020 U.S. Dist. LEXIS 118945, 2020 WL 3640064, at *4 (D. Del. July 6, 2020) ("The fact that Plaintiff's amended complaint does not contain citations to the specification does not preclude my finding that the complaint plausibly alleges an inventive concept. . . . because the claims of the patents at issue recite the aspects that Plaintiff alleges in the amended complaint make them inventive.").

6. The Court acknowledges that in its briefing, Ficep did not advocate for claim construction of the identifying step, nor did it propose a claim construction for that step. (Tr. at 84-85) But in the Court's view, the most important thing is to get the right answer to this patent eligibility dispute. And so if the Court can

District Court has not yet engaged in claim construction, and so this is another reason why grant of the Motion now would be inadvisable. *Blackbird Tech v. Uber Techs., Inc.*, C.A. No. 19-561 (MN), C.A. No. 19-561 (MN), C.A. No. 19-566 (MN), 2020 U.S. Dist. LEXIS 1310, 2020 WL 58535, at *6 (D. Del. Jan. 6, 2020) (denying defendant's Section 101 motion to dismiss because, *inter alia*, "[a]t this stage and on the limited record presently available and properly considered on a motion to dismiss, important issues of claim construction cannot be resolved in order for the Court to reach a finding at step two").

Peddinghaus has a few rejoinders to Ficep's arguments. The Court will address each below, explaining why they do not counsel in favor of granting the Motion.

First Peddinghaus asserts that, despite what the FAC says, "the claims encompass achieving the result by the *same means* used by human operators[.]" (D.I. 20 at 6-8 (emphasis added); *see also* D.I. 16 at 9-10; Tr. at 27 (Peddinghaus' counsel stating that the identifying step "has to be broad enough to . . . encompass exactly the way a human would have identified those parameters"); *id.*

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see how claim construction could be helpful and necessary to the Section 101 analysis, then Ficep's failure to better advocate for that in its briefing should not stop that process from occurring. *See Aatrix Software, Inc v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018) (noting that sometimes, "the need for claim construction might be apparent just from the claim terms themselves, to arrive at 'a full understanding of the basic character of the claimed subject matter'") (citation omitted); *see also Blackbird Tech v. Uber Techs., Inc.*, C.A. No. 19-561 (MN), C.A. No. 19-566 (MN), 2020 U.S. Dist. LEXIS 1310, 2020 WL 58535, at *6 (D. Del. Jan. 6, 2020).

at 78-80) In support, Peddinghaus cites to the "Detailed Description of Preferred Embodiments" section of the specification, which explains that:

> After identifying the intersection and/or manufacturing parameters (step **115**), the method **100** proceeds to extract from the design model the intersection and/or manufacturing parameters. Typically, this includes *copying or recording* the intersection parameters and the original intersection parameters, and all the other data, *which are present in the design model* and are not lost.

('719 patent, col. 4:28-35 (emphasis added) (*cited in* D.I. 20 at 7)) But this portion of the specification is discussing the *invention claimed in the patent*. And so far as the Court can see, when it comes to identifying intersection parameters from a CAD file, the patent does *not* clearly say that humans had been doing that for years in just the same way that the invention does it. (Tr. at 27-28)

Second, Peddinghaus cites to the sentence in the "Object of the Invention" section that states: "[t]o increase efficiency and reduce cost, the systems and methods of the present invention may be based on information included as part of existing computer-aided designs." ('719 patent, col. 2:2-5; *see also* D.I. 16 at 4, 9, 19; Tr. at 76-77) But this passage does not say anything specific about intersection parameters or about the way they were identified in the prior art.[7]

7. Peddinghaus' opening brief cites to some additional portions of the "Objects of the Invention" section of the specification in

Third, Peddinghaus argues that the FAC's allegations amount to "unsupported legal conclusions" that the Court need not accept as true. (D.I. 16 at 14; D.I. 20 at 1-3; Tr. at 8, 29) To be sure, the FAC's allegations about eligibility could have been more robust. (Tr. at 75) If they had been, Ficep's position might have been stronger. But in the FAC, Ficep does not simply invoke legal buzzwords regarding eligibility in describing the identifying limitation. It also sets out some facts describing how the limitation contributes to eligibility. (FAC at ¶¶ 41-42)[8]

C. Conclusion

Accordingly, the FAC's allegations, viewed in the light most favorable to Plaintiff, and taken together with the specification, create a material factual dispute as to patent eligibility. At this early stage of the proceedings, there is just enough here to recommend that the Motion be denied.[9]

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support of its argument that CAD files long contained intersection parameters. (D.I. 16 at 9 (citing '719 patent, cols. 5:17-26, 6:63-67)) But these portions too are describing the *claimed invention*, and thus not necessarily the prior art.

8. The FAC here thus seems distinguishable from that in *Dropbox, Inc. v. Synchronoss Techs., Inc.*, 815 F. App'x 529 (Fed. Cir. 2020), cited by Peddinghaus, (D.I. 16 at 14). In *Dropbox*, the Federal Circuit explained that the plaintiff's complaint asserted only conclusory allegations insufficient to survive the defendant's Section 101 challenge, where the complaint simply restated the claim elements and "append[ed] a conclusory statement" that the inventions were not well-known, routine or conventional in the field at the time of patenting. *Dropbox*, 815 F. App'x at 538. Here, the FAC's allegations are more detailed than that.

9. In contrast, in *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 2019 U.S. App. LEXIS 5568, 916 F.3d 1363

IV. CONCLUSION

For the foregoing reasons, the Court recommends that Peddinghaus's Motion be DENIED without prejudice to Peddinghaus's ability to raise Section 101 eligibility issues at the summary judgment stage.

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b)(2). The failure of a party to object to legal conclusions may result in the loss of the right to *de novo* review in the district court. *See Sincavage v. Barnhart*, 171 F. App'x 924, 925 n.1 (3d Cir. 2006); *Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987).

The parties are directed to the Court's Standing Order for Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Court's website, located at http://www.ded.uscourts.gov.

(Fed. Cir. 2019), cited by Peddinghaus as being comparable to this case, (D.I. 16 at 13-14; D.I. 20 at 7 n.4), the Federal Circuit determined at step one that the patent was ineligible because the patent "acknowledge[d] that data from bedside machines was previously collected, analyzed, manipulated, and displayed manually, and it simply proposes doing so with a computer[,]" 916 F.3d at 1367. Here, Plaintiff is asserting that certain data utilized by prior art processes or systems was *not* previously collected, analyzed, manipulated or displayed in the same manner as does the apparatus claimed in claim 7.

Appendix D

Dated: January 26, 2021

/s/ Christopher J. Burke
Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE

APPENDIX E — ORDER DENYING REHEARING OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, FILED OCTOBER 23, 2023

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

FICEP CORPORATION,

Plaintiff-Appellant,

v.

PEDDINGHAUS CORPORATION,

Defendant-Appellee.

2022-1590

Appeal from the United States District Court for the District of Delaware in No. 1:19-cv-01994-RGA, Judge Richard G. Andrews.

ON PETITION FOR REHEARING EN BANC

Before Moore, *Chief Judge*, Lourie, Dyk, Prost, Reyna, Wallach[1], Taranto, Chen, Hughes, Stoll, and Cunningham, *Circuit Judges*.[2]

1. Circuit Judge Wallach participated only in the decision on the petition for panel rehearing.

2. Circuit Judge Newman and Circuit Judge Stark did not participate.

Appendix E

PER CURIAM.

ORDER

Ficep Corporation filed a petition for rehearing en banc. The petition was first referred as a petition to the panel that heard the appeal, and thereafter the petition was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue October 30, 2023.

FOR THE COURT

/s/_____
Jarret B. Perlow
Clerk of the Court

October 23, 2023
Date