

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

NEOCHLORIS, INC.,)	
)	
Plaintiff,)	
)	
v.)	No. 14 C 9680
)	
EMERSON PROCESS MANAGEMENT LLLP and)	
CITGO PETROLEUM CORPORATION,)	Judge Edmond E. Chang
)	
Defendants.)	
)	
)	
)	

MEMORANDUM OPINION AND ORDER

I. Introduction

Plaintiff Neochloris owns patent number 6,845,336 (the '336 patent) for a "Water Treatment Watering System" and brings this infringement action against Defendants Emerson Process Management LLLP and CITGO Petroleum Corporation.¹ Defendants jointly moved for summary judgment, arguing that the '336 patent is invalid because it covers non-patentable subject matter under 35 U.S.C. § 101. For the reasons discussed below, Defendants' motion for summary judgment is granted because the '336 patent protects an abstract idea that is not patentable under Section 101.

¹The Court has subject matter jurisdiction over this patent action under 28 U.S.C. §§ 1331, 1338(a). Citations to the record are noted as "R." followed by the docket number and the page or paragraph number.

II. Background

Neochloris is an Illinois corporation that “develop[s] environmental technologies for public health, homeland security, and environmental protection applications.” R. 36, Pl.’s Resp. at 1. Neochloris owns the ’336 patent, which covers a water treatment monitoring system that measures water quality, sends data through a computer network, and alarms users when certain events are triggered. R. 35-3, Defs.’ Br., Exh. A, ’336 Patent. On January 6, 2015, Neochloris alleged that Emerson and CITGO (Emerson’s customer) were infringing “at least claims 13 and 17” of the ’336 patent by using Delta V, Emerson’s systems-monitoring technology. R. 18, Pl.’s Am. Compl. ¶¶ 3-24, 27. Neochloris claimed that Emerson indirectly infringed the ’336 patent by inducing Delta V users (such as CITGO) to infringe the patent and that Emerson also contributorily infringed by “instructing, aiding, assisting, authorizing, advertising, marketing, promoting, providing and/or encouraging the ... sale and use of the Delta V system.” *Id.* ¶¶ 25-31. Neochloris also alleged that CITGO directly infringed the ’336 patent by using the Delta V system across the United States, including at its refinery in Lemont, Illinois. *Id.* ¶¶ 32-35. During a status hearing, the parties jointly requested a stay of discovery to permit Defendants to file a summary judgment motion on invalidity under Section 101. R. 33, Minute Entry dated 2/18/15. The Court granted the request, *id.*, and Defendants filed this joint motion for summary judgment.

A. The '336 Patent

The Patent and Trademark Office issued the '336 patent to inventors Prasad Kodukula and Charles Stack in 2005. '336 Patent. The '336 patent describes a system of monitoring water quality at water treatment plants. *Id.* Sensors collect information such as water temperature, pH levels, flow rates, carbon dioxide concentrations, and pollution levels. *Id.* 3:23-30. This information is then sent to a remote monitoring facility through an internet connection or “broadband communication uplink.” *Id.* 3:14-19. The monitoring system reviews the data and sends an alert when there is a “process failure” or when the data falls outside of a preselected range. *Id.* 4:37-43.

Neochloris alleges infringement of “at least claims 13 and 17” of the patent. Pl.’s Am. Compl. ¶ 27. Claim 13 describes the process for monitoring the water and sending out alarms:

13. A process for real-time monitoring of a water treatment facility comprising the steps of:
 - a) collecting operational data from said facility;
 - b) providing a monitoring computer at a remote location from the facility;
 - c) transferring said data over internet communication lines to the computer;
 - d) providing software with the monitoring computer to operably analyze the data and to detect ongoing and predict future waste water treatment process failure events; and
 - e) sending an alarm signal from the monitoring computer to the facility to provide warning of the process failure events.

'336 Patent 13:3-17. Claim 17 outlines a similar process, but adds a hierarchal alarm system:

17. A process for real-time monitoring of a water treatment facility comprising the steps of:

a) collecting operational data from said facility;

b) providing a monitoring computer at a remote location from the facility;

c) transferring said data over communication lines to the computer;

d) providing software with the computer to operably analyze the data and predict waste water treatment process upsets and process failure events; and

e) sending a hierarchal alarm signal from the computer to the facility to provide warning of the process upsets and failure events; said alarm signal having a first hierarchy alarm that is sent to a first party in response to an upset or event having a lower degree of severity and a second hierarchy alarm that is sent to a second party in response to an upset or event having a higher severity.

Id. 13:38-56. All in all, these claims describe a method for (1) collecting data at a water treatment plant; (2) sending the data over an internet connection to a computer; (3) monitoring and analyzing the data with an ordinary computer and software; and (4) alerting the facility of any abnormalities.

III. Standard of Review

Summary judgment must be granted “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). A genuine issue of material fact exists if “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). In evaluating

summary judgment motions, courts must view the facts and draw reasonable inferences in the light most favorable to the non-moving party. *Scott v. Harris*, 550 U.S. 372, 378 (2007). The Court may not weigh conflicting evidence or make credibility determinations, *Omnicare, Inc. v. UnitedHealth Grp., Inc.*, 629 F.3d 697, 704 (7th Cir. 2011), and must consider only evidence that can “be presented in a form that would be admissible in evidence.” Fed. R. Civ. P. 56(c)(2). The party seeking summary judgment has the initial burden of showing that there is no genuine dispute and that she is entitled to judgment as a matter of law. *Carmichael v. Village of Palatine*, 605 F.3d 451, 460 (7th Cir. 2010); *see also Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986); *Wheeler v. Lawson*, 539 F.3d 629, 634 (7th Cir. 2008). If this burden is met, the adverse party must then “set forth specific facts showing that there is a genuine issue for trial.” *Anderson*, 477 U.S. at 256. In deciding Defendants’ motion for summary judgment, the Court views the evidence in the light most favorable to the non-moving party. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

In addition, Section 101 validity is a question of law.² *See, e.g., Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 83 F. Supp. 3d 774, 777 (N.D. Ill. 2015) (citing *Fort Properties, Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1320 (Fed. Cir. 2012)). Courts may resolve the question of patent eligibility under Section 101 in a summary judgment motion before addressing claim construction. *See, e.g., Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1273 (Fed.

²The parties’ disputed facts, R. 37, 39, do not affect the invalidity analysis, as it is the claims of the ’336 patent that are material in deciding this summary judgment motion.

Cir. 2012) (“Claim construction is not an inviolable prerequisite to a validity determination under § 101.”); *Mkt. Track, LLC v. Efficient Collaborative Retail Mktg., LLC*, 2015 WL 3637740, at *2 (N.D. Ill. June 11, 2015) (“claim construction is not necessary if the asserted claims, read most favorably to the patent holder, still recite an abstract idea.”).

Most courts have also required the movant to prove invalidity by clear and convincing evidence because patents are afforded a presumption of validity. *See, e.g., Ameritox, Ltd. v. Millennium Health, LLC*, 2015 WL 728501, at *14 (W.D. Wis. Feb. 19, 2015) (citing *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011)). But at least one court in this circuit has questioned this presumption at the Section 101 stage, *Celsis In Vitro*, 83 F. Supp. 3d at 777, based on a recent Federal Circuit concurrence: “The [Patent and Trademark Office] has for many years applied an insufficiently rigorous subject matter eligibility standard, [so] no presumption of eligibility should attach when assessing whether claims meet the demands of 101.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 720-21 (Fed. Cir. 2014) (Mayer, J., concurring). *See also Wireless Media Innovations, LLC v. Maher Terminals, LLC*, 2015 WL 1810378, at *5 (D.N.J. Apr. 20, 2015) (the Supreme Court “has never mentioned—much less applied—any presumption of eligibility” in the Section 101 context, so no presumption applies). But because Defendants meet the clear and convincing evidence standard, the Court need not decide the standard-of-proof issue. *See Celsis In Vitro*, 83 F. Supp. 3d at 777.

IV. Analysis

A. Standard for Patentability and the *Alice* Framework

The Patent Act describes the scope of patentable material: “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[.]” 35 U.S.C. § 101. But it is fundamental that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (citation and quotations omitted). Because they are the “basic tools of scientific and technological work ...[,] monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (citation and quotations omitted). *See also Bilski v. Kappos*, 561 U.S. 593, 606 (2010) (courts must “strick[e] the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles.”).

At the same time, the Supreme Court has recognized that because “all inventions at some level embody, use, reflect, rest upon, or apply ... abstract ideas,” this exclusionary principle cannot be so broad as to make something un-patentable simply because it involves, at some level, an abstract concept. *Mayo*, 132 S. Ct. at 1293 (citing *Diamond v. Diehr*, 450 U.S. 175, 187 (1981)). So long as the concept has been applied to “a new and useful end,” transforming the abstract idea into an

actual invention, the result may be eligible subject matter for patent protection. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (quotations omitted).

In *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014), the Supreme Court refined the two-step analysis for determining whether material is patentable under Section 101. First, the reviewing court asks if the claims in question are “directed to a patent-ineligible concept” on their face. *Id.* at 2355. If so, the court then must ascertain if the claims nonetheless contain an “inventive concept” that can “transform th[e] abstract idea into a patent-eligible invention.” *Id.* at 2357. The court “consider[s] 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.” *Id.* at 2355 (citing *Mayo*, 132 S. Ct. at 1297). At its heart, the question boils down to whether the patent-seeker claims ownership over a basic “building block of human ingenuity,” rather than a creation that “integrate[s] the building blocks into something more.” *Id.* at 2354 (citation and quotations omitted).

B. The '336 Patent Covers an Abstract Idea

Defendants argue that the '336 patent is invalid because it describes the patent-ineligible abstract idea of “monitoring [a process], processing results and reporting selected results.” Defs.’ Br. at 10. As discussed next, the Court agrees that the '336 patent does not satisfy subject matter eligibility under the *Alice* framework.

As an initial matter, for the purposes of a Section 101 challenge, courts may look to claims that are representative of the patent when the patent’s claims are

“substantially similar and linked to the same abstract idea.” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014); *see also Alice*, 134 S. Ct. at 2359-60. So “addressing each claim of the asserted patents [is] unnecessary.” *Id.* The parties focus on two claims—13 and 17—and do not dispute that these are representative claims of the ’336 patent. *See* Defs.’ Br. at 10; Pl.’s Resp. at 3. Claims 13 and 17 describe the process of collecting data at a water treatment plant, transmitting the data to the computer, using a computer and software to monitor the data, and sending alarms when there are potential problems. Defendants argue that humans have, for some time, monitored processes “with a means of communication (telephone, cell phone, 2-way radio) and a pencil and paper.” Defs.’ Br. at 19.

The Court agrees that, at bottom, the claims cover the general process of observing, analyzing, monitoring, and alerting that can be done entirely by the human mind and by using pen and paper. *See, e.g., CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (“methods which can be performed *entirely* in the human mind are the types of methods that embody the ‘basic tools of scientific and technological work’ that are free to all men and reserved exclusively to none.”) (emphasis in original) (citation omitted). Although the Supreme Court has not “delimit[ed] the precise contours of the ‘abstract ideas’ category,” the Federal Circuit has determined that collecting and processing data is an abstract idea. *Content Extraction*, 776 F.3d at 1347 (a patent for reading and processing the data on checks involved the abstract idea of “data collection,

recognition, and storage,” a process that “is undisputedly well-known. Indeed, humans have always performed these functions.”). Similarly, courts have also invalidated patents that claimed nothing more than merely monitoring a process. *See, e.g., IPLearn-Focus, LLC v. Microsoft Corp.*, 2015 WL 4192092, at *1 (N.D. Cal. July 10, 2015) (using a computer and sensors to monitor a student’s concentration levels and analyze changes was an abstract idea); *Wireless Media Innovations*, 2015 WL 1810378, at *8 (“Patents are directed to the same abstract idea: monitoring locations, movement, and load status of shipping containers within a container-receiving yard, and storing, reporting and communicating this information in various forms through generic computer functions.”); *Hewlett Packard Co. v. ServiceNow, Inc.*, 2015 WL 1133244, at *7 (N.D. Cal. Mar. 10, 2015) (a system that monitored service tickets and alerted help desk users “[did] nothing more than recite the abstract idea of monitoring deadlines and alerting users about upcoming deadlines, along with an instruction to implement the idea on various computing components”); *Joao Bock Transaction Sys., LLC v. Jack Henry & Associates, Inc.*, 76 F. Supp. 3d 513, 516 (D. Del. 2014) (patent allowing cardholder to monitor credit card transaction activity, make predetermined limitations on transactions, and accept or deny a transaction based on those restrictions covered an abstract idea).³

³Neochloris cites *Helios Software, LLC v. SpectorSoft Corp.*, 2014 WL 4796111, at *17 (D. Del. Sept. 18, 2014), where the district court refrained from deeming an internet-activity monitoring system as an abstract idea. Pl.’s Resp. at 8. But that opinion is not persuasive here because the defendant there “ma[de] no effort to show that these ideas are fundamental truths or fundamental principles the patenting of which would pre-empt the use of basic tools of scientific and technological work.” *Id.* The district court acknowledged that “remotely monitoring data” could be abstract, but the court did not invalidate the patent because the defendant offered no support for its position. *Id.* Unlike SpectorSoft,

Neochloris does not refute that a system of observing, analyzing, monitoring, and alerting is an abstract idea. Instead, Neochloris counters that Defendants (1) “simplified” the claim language and ignored limiting language in the claims; and (2) failed to provide adequate historical and evidentiary support that the patent involves a fundamental or long-standing human practice.

Neochloris first argues that Defendants failed to consider the ’336 patent’s claim limitations, including the system’s use of hardware and software to predict future events. Pl.’s Resp. at 3-4; 7-8. But even with those limitations, the claims still only describe the abstract idea of collecting data, monitoring the data, processing results, and alerting the user of the results. In any event, any claim limitations, inventive concepts, or “novelty in implementation of the idea [are] [] factor[s] to be considered only in the second step of the Alice analysis.” *Ultramercial*, 772 F.3d at 715 (explaining that step two involves “examin[ing] the limitations of the claims” to find an inventive concept). As explained in detail below, Neochloris’s asserted limitations do not add anything concrete to the claim such that the abstract idea becomes patentable. *See infra* Section IV(C).

The Court discerns Neochloris’s second argument to be that Defendants have not met their burden because they have not cited to historical evidence or academic literature showing that the process of observing, analyzing, monitoring, and alerting is a long-standing human practice. Pl.’s Resp. at 8. This argument is unpersuasive. Although historical prevalence of a purported invention may help

Defendants here have presented arguments and evidence to show why they are entitled to judgment.

guide a court’s analysis, *see buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (citing a 1927 article on suretyship), it is not required in the *Alice* framework. Indeed, a court’s role is not to determine how many centuries humans have engaged in a certain practice, but to determine whether a patent involves an idea, concept, or principle. *Alice*, 134 S. Ct. at 2355. So, although some cases do rely on historical evidence on the way to invalidating a patent as subject-ineligible, not surprisingly, many do not. *See, e.g., Ultramercial*, 772 F.3d at 714 (abstract idea of viewing an advertisement before accessing content was not patentable).

C. The Patent Does Not Have an Inventive Concept

In the second step of the analysis, courts will “consider the limitations of each claim both individually and as an ordered combination to determine whether the additional limitations transform the claim into a patent-eligible application of a patent-ineligible concept.” *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2355). To be patentable, the claims must include “additional features to ensure that [it] is more than a drafting effort designed to monopolize [the abstract idea].” *Alice*, 134 S. Ct. at 23570 (citing *Mayo*, 132 S. Ct. at 1297) (quotations omitted). It is insufficient, for example, to state the abstract idea and add “apply it.” *Id.* (citation omitted). As previously discussed, Neochloris argues that three inventive features transform the monitoring concept into a patent-eligible application, namely, the system’s (1) use of computers and software; (2) ability to predict future failure events; and (3) ability to reduce human

error. Pl.'s Resp. at 9-10. None of these limitations make the abstract idea patent-eligible.

1. Use of Computers and Software

Neochloris first argues that the '336 patent is salvageable because “the claims are tied to a monitoring computer with software to operably analyze the data and to detect ongoing and predict future waste water treatment process upsets and process failure events.” Pl.'s Resp. at 10 (quotations omitted) (citing Claim 13). Neochloris further asserts that “a computer is integral to the claimed invention.” *Id.* To determine whether there is an inventive concept, “[t]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea ... on a generic computer.” *Alice*, 134 S. Ct. at 2359. As in *Alice*, the claims here do not.

An abstract idea is not transformed by the addition of a computer when “the function performed by the computer at each step of the process is purely conventional.” *Id.* (quotations omitted) (citing *Mayo*, 132 S. Ct. at 1299). “At its most basic ... a computer is an automatic electronic device for performing mathematical or logical operations” involving the monitoring and processing of data. *Bancorp Servs.*, 687 F.3d at 1277 (citation and quotations omitted). For example, in *Content Extraction*, the Federal Circuit rejected the patent owner’s argument that using a scanner and computer to extract and store data from a check was an inventive concept. 776 F.3d at 1348-49. Because these were “well-known, routine, and conventional functions of scanners and computers,” these limitations did not save

the plaintiff's abstract idea. *Id.*; see also, e.g., *Bancorp Servs.*, 687 F.3d at 1278 (“the use of a computer in an otherwise patent-ineligible process for no more than its most basic function—making calculations or computations—fails to circumvent the prohibition against patenting abstract ideas and mental processes.”).

Similarly, here, the '336 patent employs any “monitoring computer” and any “software” to perform basic computer functions. The computer and software simply make routine calculations to monitor and analyze water data. The claims are not limited to any particular software or hardware, and this generic technology has no special capabilities that “improve the functioning of the computer itself” or “effect an improvement in any other technology or technical field.” *Alice*, 134 S. Ct. at 2359. Because the addition of a computer and software in the '336 patent “does no more than require a generic computer to perform generic computer functions,” *id.* at 2359, this generic technology does not save the '336 patent.

Neochloris counters that the computer and software perform more than generic functions because the technology “us[es] highly sophisticated techniques such as encryption/decryption of data, artificial neural networks, expert systems, optimization, pattern recognition, search functions, and advanced statistical functions.” Pl.'s Resp. at 3-4 (citing '336 Patent 9:4-9). But Neochloris cites the claim specification rather than the limitations in the claims themselves. Claims 13 and 17 only refer to any “computer” and “software,” and “the important inquiry for a § 101 analysis is to look to *the claim.*” *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (emphasis added). In *Accenture*,

“[a]lthough the specification of the [disputed] patent contains very detailed software implementation guidelines, the system claims themselves only contain generalized software components arranged to implement an abstract concept on a computer.” *Id.* And “the complexity of the implementing software or the level of detail in the specification does not transform a claim reciting only an abstract concept into a patent-eligible system or method.” *Id.* To be sure, a patent’s specification can provide context and thus help illuminate the meaning of a term in a claim, but that is *not* Neochloris’s proposed use for the specification. To add the detailed explanation into the claims would do much more than provide context for a disputed meaning of a term—it would instead rewrite the claims.

Even though Neochloris does not direct the Court’s attention to any other claims, the Court recognizes that some of the other claims include limitations mentioned in the specifications. For example, Claim 19 of the ’336 patent includes software with “an artificial neural network module,” a “search module,” a “statistical module,” and the ability to “locate common patterns.” ’336 Patent 13:61-14:50. Claim 24 also states that the computer “optimize[s] operation of the facility.” *Id.* 16:4. As previously explained, Neochloris could have disputed that Claims 13 and 17 represent the patent as a whole. But it did not, choosing instead to focus on these two claims. *See Content Extraction*, 776 F.3d at 1348 (plaintiff “never asserted in its opposition ... that the district court should have differentiated any claim from those identified as representative ... , [n]or did [it] identify any other claims as purportedly containing an inventive concept.”). Even if the Court were to consider

these limitations, however, it would still conclude that they are no more than elaborate descriptions of rudimentary computer functions. Neochloris provides no explanation or citation as to why these advanced functions are inventive. Indeed, it is not even clear what “an artificial neural network module” refers to besides a central processing unit—a basic computer’s brain. And nowhere does Neochloris assert that it invented an interface that optimizes water management or created a new form of searching, statistical analysis, pattern recognition, or data encryption. *See, e.g., Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (plaintiff argued that its “interactive interface” had the special ability to tailor information to the user, but the software was simply the “brains of the outfit,” or a “generic web server with attendant software, tasked with providing web pages to and communicating with the user’s computer”) (citation and quotations omitted). Thus, Claims 13 and 17, which are representative of the patent as a whole, involve only generic computer functions. The additional “sophisticated techniques” do not add an inventive concept.⁴

⁴Neochloris’s citation to the machine or transformation test, Pl.’s Resp. at 9-10, is inapposite. This test is not dispositive because “the Supreme Court emphasized that satisfying the machine-or-transformation test, by itself, is not sufficient to render a claim patent-eligible, as not all transformations or machine implementations infuse an otherwise ineligible claim with an ‘inventive concept.’” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (citing *Mayo*, 132 S. Ct. at 1301). Even without delving into the test, it is unlikely that Neochloris would meet the standard it cited—that “the addition of a machine must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly.” Pl.’s Resp. at 9-10 (citing *Walker Digital, LLC v. Google, Inc.*, 66 F. Supp. 3d 501, 506 (D. Del. 2014)).

2. Ability to Predict Future Events and Reduce Human Error

Neochloris also argues that the ability “to predict upsets that a human operator may overlook” on “a real time basis” is sufficiently inventive. Pl.’s Resp. at 4, 10. This limitation is included in Claims 13 (the “real-time monitoring” system “predict[s] future waste water treatment process failure events”) and 17 (the “real-time monitoring” system “predict[s] waste water treatment process upsets and process failure events”). These abilities, Neochloris offers, also reduce human error. *Id.* at 11. Once again, however, none of these limitations go beyond the basic functioning of a computer, and Neochloris does not cite any case law to that effect. There is no inventive concept when a computer just replicates what a person can do, only more quickly and accurately. A computer can more quickly and accurately solve the various forms of Bernoulli’s equation,⁵ but using a computer to that does not add an inventive concept to the fundamental truth of that mathematical equation.

As to predictive ability, the Federal Circuit recently upheld a patent’s invalidity even though it involved predicting a customer’s preferences. *OIP Tech., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1361 (Fed. Cir. 2015). The patent covered “a price-optimization method that help[ed] vendors automatically reach better pricing decisions through automatic estimation and measurement of actual demand to select prices.” *Id.* (citation omitted). The patent helped sellers set prices by gathering statistics about consumers, using that data to project a demand curve,

⁵For example, $p_t = p_s + \frac{1}{2}\rho v^2$ (where p_t = total pressure; p_s = static pressure; ρ = fluid density; and v = velocity of fluid).

and choosing a new price for a product. *Id.* at 1361. But the court concluded that “[a]t best, the claims describe the automation of the fundamental economic concept of offer-based price optimization through the use of generic-computer functions.” *Id.* at 1363. The key inventive feature was the automation of traditional methods of price optimization, and that still was not enough to make it patent-eligible. *Id.*

Nor is the ability to predict in real-time an inventive concept. In another persuasively reasoned opinion, a district court held that predicting what a customer wanted to buy—or “offering something to a customer based on his or her interest in something else”—was a “marketing technique as old as the field itself.” *Tuxis Tech., LLC v. Amazon.com, Inc.*, 2014 WL 4382446, at *3 (D. Del. Sept. 3, 2014). And “that the upsell item can be recommended in real time using a computer does not save the claim because the computer must be integral and facilitate the process in a way that a person making calculations or computations could not.” *Id.* at *5. Although humans cannot predict customer preferences as quickly as a computer, the computer was not integral because it “performs nothing more than purely conventional steps that are well-understood, routine, and previously known to the industry.” *Id.* (citing *Alice*, 134 S. Ct. at 2359).

Similarly, in this case, the monitoring system’s ability to predict failures in real time is not sufficiently inventive to save the ’336 patent. Like the patents in *OIP* and *Tuxis*, the ’336 system automates a computational process that a person could do with pen and paper—for example, “a human could readily measure the pH of water every hour and note an increasing or decreasing trend that would predict

that the water may breach a safe pH range in the near future.” R. 38, Defs.’ Reply at 10-11. Though perhaps true, it is irrelevant that “it would not be humanly possible for one to physically examine data from multiple sensors as well as historical data and predict future waste water treatment process upsets and process failure events on a real time basis.” Pl.’s Resp. at 10. This is because “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP*, 788 F.3d at 1363.

Finally, Neochloris makes the related argument that the ’336 system is inventive because it detects events that “may be overlooked by a human operator. Moreover, it was the inventors’ stated goal to avoid human intervention in analyzing and alarming to guard against operator error or misconduct.” Pl.’s Resp. at 1. But again, this limitation only describes the generic ability of a computer to work more accurately and does not make the claim inventive. *See, e.g., OIP*, 788 F.3d at 1363 (discussed above); *CertusView Technologies, LLC v. S & N Locating Servs., LLC*, 2015 WL 269427, at *20 (E.D. Va. Jan. 21, 2015) (“[u]ndoubtedly, the use of a photographic image reduces the effect of human error,” but “it is hardly transformative to recite the use of a more accurate photographic image” as an inventive concept, when the photograph simply replaced “the hand-made sketch or drawing” conventionally used to excavate land).

In sum, none of the ’336 patent’s limitations—the use of computers and software, the predictive abilities, or the ability to reduce error—constitute a sufficiently inventive concept to warrant patent protection.

V. Conclusion

For the reasons given above, Defendants' motion for summary judgment [34] on the invalidity of the '336 patent is granted. Judgment will be entered against Neochloris's claims as to both Defendants and in favor of Defendants' counterclaim for a declaration of invalidity. The status hearing of October 27, 2015 is vacated.

ENTERED:

s/Edmond E. Chang
Honorable Edmond E. Chang
United States District Judge

DATE: October 13, 2015