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

CHECKSUM VENTURES, LLC,	)	
	)	
Plaintiff,	)	Case No. 18-cv-6321
	)	
v.	)	Judge Robert M. Dow, Jr.
	)	
DELL INC.,	)	
	)	
Defendant.	)	

MEMORANDUM OPINION AND ORDER

Plaintiff Checksum Ventures, LLC brings one claim of patent infringement, seeking damages pursuant to 35 U.S.C. § 284. Before the Court is Defendant Dell Inc.'s motion to dismiss. For the reasons set forth below, Defendant's motion to dismiss is granted without prejudice and with leave to file an amended complaint by October 28, 2019. The case is set for further status hearing on November 7, 2019 at 9:00 a.m.

I. Background[1]

Patent 8,301,906 (the '906 patent) was issued by the U.S. Patent and Trademark Office on October 30, 2012. [1-1 at 1 (hereinafter cited as '906 patent).] The '906 patent concerns a particular form of data identifier called the "checksum."[2] See generally [*id.*]. Plaintiff Checksum Ventures is the owner of the '906 patent by assignment. [1, ¶7.]

[1] For purposes of the motion to dismiss, the Court accepts as true all of Plaintiff's well-pleaded factual allegations and draws all reasonable inferences in Plaintiff's favor. *Killingsworth v. HSBC Bank Nev., N.A.*, 507 F.3d 614, 618 (7th Cir. 2007).

[2] Checksums have long been used to compare whether two data files are identical. See, *e.g.*, *Lexmark Intern., Inc. v. Static Control Components*, 387 F.3d 522, 531, 541 (6th Cir. 2004). As the Sixth Circuit has explained, a checksum is a "calculation" or algorithm run "using every data byte of the [data file] as input. The program then compares the result of that calculation with a 'checksum value' that is located elsewhere * * *. If any single byte of the [data file] is altered, the checksum value will not match the checksum calculation result." *Id*. In other words, checksum algorithms generate unique identifiers for data

The patent teaches that "[c]onventional data administration concepts lack the possibility for users to allow other users to verify or integrity check data." '906 patent at 1:27–29. This is especially problematic when data "season and tend to become more and more erroneous with time." *Id*. at 1:30–32. The '906 patent's specification describes the intended end goal as follows: "Embodiments of the present invention provide the advantage that data can be verified and their origin can be authenticated." '906 patent at 10:35–38. The "invention is based on the finding that based on checksums, respectively encrypted checksums, data validity and integrity can be verified." *Id*. at 2:34–36. The claims, however, do not include any verification or authentication capabilities, and instead merely describe an apparatus, method, and computer program for providing checksums, and writing and storing them in such a way that they can be disaggregated and read separately from the underlying data. Claim 1 is exemplary:

1. An apparatus for writing checksum information on a data content on a storage medium, comprising:

> a provider for providing checksum information based on a data content; and
>
> a writer for writing the data content, the checksum information and control information on a physical or logical location of the checksum information on the storage medium, such that a baseline reader can read the data content, the enhanced reader can read and process the control information and the checksum information and the baseline reader ignores, skips, or does not read the checksum information.

Independent claims 9 and 10 use almost identical language to describe a method for writing checksum information and computer program code, respectively. Claims 2–8 are derivative of

files, using the data files themselves as inputs. The algorithm will only spit out the same identifier (the checksum) if the inputs (the data files themselves) are completely identical.

claim 1. The '906 patent does not purport to invent checksums or an innovative way to generate them, and instead suggests using "conventional algorithms" to compute them. See '906 patent at 3:1–6.

Plaintiff alleges that Defendant, Dell Inc. has infringed on the '906 patent, asserting claim 1 in its complaint. [1, ¶ 14.] Although not the subject of the motion to dismiss, an overview of Dell's alleged infringement is instructive in understanding how checksums are used in practice. According to the complaint, Defendant's EMC VNX Storage System uses checksums extensively. [*Id*., ¶¶ 14–20.] For example, the EMC VNX uses checksums to identify and remove duplicate files—if two files' respective checksums match, then the EMC VNX recognizes that they are identical and deletes one to save space. [*Id*., ¶¶ 14–18]; see also generally [1-3]; [1-4]. The EMC VNX also uses checksums to retrieve commonly used files more efficiently—it saves commonly used files at a more convenient location (the Fast Cache) and uses checksums to query the Fast Cache. [1, ¶¶ 19–20]; see also generally [1-5]. If the checksum of the queried file matches the checksum of a file in the Fast Cache, the EMC VNX pulls from the Fast Cache. [*Id.*] Defendant moved to dismiss [15] on the ground that the '906 patent does not meet the threshold patent-eligibility requirements of 35 U.S.C. § 101. See also [18].

II. Legal Standard

To survive a Rule 12(b)(6) motion to dismiss for failure to state a claim upon which relief can be granted, the complaint first must comply with Rule 8(a) by providing "a short and plain statement of the claim showing that the pleader is entitled to relief," Fed. R. Civ. P. 8(a)(2), such that the defendant is given "fair notice of what the * * * claim is and the grounds upon which it rests." *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (quoting *Conley v. Gibson*, 355 U.S. 41, 47 (1957)) (alteration in original). Second, the factual allegations in the complaint must be

sufficient to raise the possibility of relief above the "speculative level." *E.E.O.C. v. Concentra Health Servs., Inc.*, 496 F.3d 773, 776 (7th Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). "A pleading that offers 'labels and conclusions' or a 'formulaic recitation of the elements of a cause of action will not do.' " *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Twombly*, 550 U.S. at 555). Dismissal for failure to state a claim under Rule 12(b)(6) is proper "when the allegations in a complaint, however true, could not raise a claim of entitlement to relief." *Twombly*, 550 U.S. at 558. In reviewing a motion to dismiss pursuant to Rule 12(b)(6), the Court accepts as true all of Plaintiff's well-pleaded factual allegations and draws all reasonable inferences in Plaintiff's favor. *Killingsworth v. HSBC Bank Nevada, N.A.*, 507 F.3d 614, 618 (7th Cir. 2007). Evaluating whether a "claim is sufficiently plausible to survive a motion to dismiss is 'a context-specific task that requires the reviewing court to draw on its judicial experience and common sense.'" *Id.* (quoting *McCauley v. City of Chicago*, 671 F.3d 611, 616 (7th Cir. 2011)).

The Federal Circuit has "repeatedly recognized that in many cases it is possible and proper to determine patent eligibility under 35 U.S.C. § 101 on a Rule 12(b)(6) motion." *Genetic Technologies, Ltd. v. Merial LLC*, 818 F.3d 1369, 1373 (Fed. Cir. 2016) (citation omitted); see also *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (collecting recent cases). Likewise, "claim construction is not an inviolable prerequisite to validity determinations under § 101." *Genetic Technologies, Ltd.*, 818 F.3d at 1374. In sum, the Federal Circuit has "repeatedly affirmed § 101 rejections at the motion to dismiss stage, before claim construction or significant discovery has commenced." *Cleveland Clinic Foundation v. True Health Diagnostics LLC*, 859 F.3d 1352, 1360 (Fed. Cir. 2017) (collecting cases and affirming dismissal of complaint when plaintiff "provided no proposed construction of any terms").

III. Analysis

Federal statute establishes the baseline threshold for patent-eligibility: "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. The Supreme Court, however, has recognized in this definition of patentability "an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208, 216 (2014). This exception is applied considering two competing policy principles. First, the exception applies when the patent would "preempt" other inventions by "improperly tying up the future uses of [the] building blocks of human ingenuity." *Id*. (internal quotation marks and citations omitted). At the same time, however, applying the exception to abstract ideas could "swallow all of patent law" because "[a]t some level, all inventions [] embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Id*. at 217 (internal quotation marks and citations omitted).

The Supreme Court has established a two-part framework (known as the "*Alice/Mayo* test") to determine whether claim is patent eligible. See generally *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208 (2014).; *Mayo Collaborative Services v. Prometheus Laboratories, Inc*., 566 U.S. 66 (2012). First, the Court must determine whether the claim is directed toward a patent ineligible concept—that is the laws of nature, natural phenomena, and abstract ideas. *Alice*, 573 U.S. at 217; *Mayo*, 566 U.S. at 77. If so, the Court must proceed to step two, the "search for an inventive concept." *Alice*, 573 U.S. at 217 (quotation marks and citation omitted). Specifically, the Court will examine "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 217–18 (quoting *Mayo*, 566 U.S. at 79, 73) (quotation marks omitted).

Defendant asserts that the '906 patent is ineligible for patenting because it is an uninventive application of an abstract idea. Plaintiff counters that the invention embodied in '906 patent is not abstract, and that the claims embody an inventive concept. Plaintiff further contends that dismissing the complaint is premature because Plaintiff has raised questions of fact and the Court has not yet construed the claim.

A. *Alice/Mayo* Step One

First, the Court must determine whether the claim at issue is directed toward a patent ineligible concept, here, an abstract idea. *Alice*, 573 U.S. at 217. Unfortunately, "[t]he 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). One line of cases has acknowledged that improvements in computer technology are patent eligible, but "generalized steps to be performed on a computer using conventional computer activity" are considered abstract ideas. *Id*. at 1336, 1338; see also *Intellectual Ventures I LLC v. Erie Indemnity Company*, 850 F.3d 1315, 1327 (Fed. Cir. 2017) ("[O]rganizing and accessing records through the creation of an index-searchable database[] includes longstanding conduct that existed well before the advent of computers and the Internet" and is therefore an abstract idea); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (observing that "1) collecting data, 2) recognizing certain data within the collected set, and 3) storing that recognized data in memory" are all abstract ideas); *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) ("Without additional limitations, a process that employs mathematical algorithms

to manipulate existing information to generate additional information is not patent eligible."). In contrast, some seemingly conventional computer activities can qualify as non-abstract improvements if the patent explicitly describes an assertedly innovative method, system, or apparatus that improves computer functioning. See, *e.g.*, *Ancora Technologies, Inc. v. HTC America, Inc.*, 908 F.3d 1343, 1344–1346, 1348–49 (Fed. Cir. 2018) (describing assertedly innovative method, and explaining that seemingly conventional computer activity "can be a non-abstract computer-functionality improvement if done by a *specific technique* that departs from early approaches to solve a *specific computer problem*") (emphasis added).

Along these lines, "a claimed invention must embody a concrete solution to a problem having the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it." *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018) (quotation marks and citation omitted); see also *Epic IP LLC v. Backblaze, Inc*., 351 F. Supp. 3d 733, 739 (D. Del. 2018) (Bryson, J.) (collecting cases). Patent claims that are "drafted in such a result-oriented way that they amounted to encompassing 'the principle in the abstract' no matter how implemented" are functional and therefore directed toward abstract ideas. *Interval Licensing*, 896 F.3d at 1343.

The apparatus and methods described in the '906 patent are abstract ideas because they do nothing more than recite "generalized steps to be performed on a computer using conventional computer activity." *Enfish*, 822 F.3d at 1338. The claimed "provider for providing checksum information based on a data content," '906 patent at 10:66–67, merely "employs mathematical algorithms to manipulate existing information to generate additional information" and the specification concedes that the provider can use "conventional" technology. *Digitech Image*, 758 F.3d at 1351; '906 patent at 3:1–3 ("Algorithms used for building the checksums can be chosen

from a number of different options, including but not restricted to conventional algorithms."). Likewise, the claimed "writer" that writes the checksum output to a location in a storage device and then records the location of the checksum data is patent ineligible: both "storing [] data in memory" and data retrieval from memory are abstract ideas. *Content Extraction*, 776 F.3d 1343 at 1347; *Erie Indemnity*, 850 F.3d at 1327. The '906 patent does not prescribe to the writer a "specific technique * * * to solve a specific computer problem"—let alone one that "departs from earlier approaches." *Ancora*, 908 F.3d at 1348–49.

Plaintiff also argues at length that the '906 patent is, in fact, specific because it teaches that the writer records such that the underlying data can be disaggregated and read separately from the metadata (here, the checksums and their respective location data). [29 at 4–5, 7.] This argument fails for three reasons.

First, the proposed invention does not actually claim either the baseline or enhanced readers as part of the apparatus. Thus, the readers' respective abilities to read different data are irrelevant, post-solution activity. See *Bilski v. Kappos*, 561 U.S. 593, 612 (2010) ("[L]imiting an abstract idea to one field of use or adding token postsolution components did not make the concept patentable.") Because the patent does not claim any new method for writing data (let alone with specificity), this functionality is abstract. *Ancora*, 908 F.3d at 1348–49.

Second, the writer's (and readers') abilities are described in entirely functional terms. The '906 patent claims only the result of having different readers analyze the data differently, without any "concrete solution" or specific "way of achieving it." *Interval Licensing*, 896 F.3d at 1343; see also *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (holding claimed menu interface abstract because claimant "[did] not claim a particular way of programming or designing the software to create menus that have these features, but instead merely claim the

resulting systems"). Similarly, the '906 patent does not recite *how* the writer should write data such that the "baseline reader" cannot read checksum-related metadata; rather it decrees it so. See, *e.g.*, '906 patent at 3:53–60. As such, the claimed patent "encompass[es] the 'principle in the abstract' " and forecloses seemingly any method of storing the data such that some readers read the data together and others do not. *Interval Licensing*, 896 F.3d at 1343.

Finally, the writer's limitations are not just functional—they are illusory. The Federal Circuit has recently ruled in two similar cases that writing and reading different types of data differently are, without more, abstract ideas. *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607 (Fed. Cir. 2016), concerned a patented "method and system for taking, transmitting, and organizing digital images." 823 F.3d 607, 609 (Fed. Cir. 2016). The method called for recording the digital images along with "classification information" and then reading the classification information separately from the image itself to determine where to store the image. *Id*. at 610. The Federal Circuit explained that the patent claims were "directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem." *Id*. at 612. Similarly, in *Electric Power Group, LLC v. Alstom, S.A.*, 830 F.3d 1350 (Fed. Cir. 2016), the patent at issue concerned a method of detecting events on an interconnected powergrid by "receiving a plurality of data streams" and analyzing said data. *Id.* at 1351–52 (citation omitted). The Federal Circuit explained that "collecting information, *including when limited to particular content* (which does not change its character as information) [is] within the realm of abstract ideas." *Id*. at 1353 (emphasis added). The technology did not assert a technological improvement, so the Federal Circuit held the patent as directed to an abstract idea. *Id*. at 1354.

The '906 patent's proposed writing apparatus is closely analogous to these cases. Both *TLI Communications* and *Electric Power* implicitly assumed that writing metadata so that it could be read separately from the underlying data is a conventional computer task. *See TLI Communications*, 823 F.3d at 612–13 (explaining that when a telephone sends an image along with metadata to a server such that the server can read the metadata separately from the data, it performs a generic computer function); *Electric Power*, 830 F.3d at 1353–54 (explaining that data, by its nature, can be disaggregated, read, and analyzed separately and that those tasks are abstract ideas). That is, any data reader can be specified to read or ignore any data it has captured. The '906 patent's limitation that the underlying data and metadata should be capable of disaggregation merely recites the tautology that the data is capable of being read by a computer. Without asserting any improvement in writing techniques, these limitations cannot save the '906 patent at *Alice/Mayo* step 1.

Finally, the dependent claims also recite abstract ideas.[3] For example, claim 2 discusses encryption, but provides no specifics or purported innovation; in its entirety, it reads:

> "The apparatus of claim 1, further comprising an encryptor for encrypting the checksum information to obtain an integrity information, the encryption being based on an encryption key and wherein the writer is adapted for writing the integrity information and control information on a physical or logical location of the integrity information to the storage medium."

See also 4:14–19 ("In embodiments, the means **120** for encrypting the checksum information may utilize asymmetrical or symmetrical encryption algorithms. For example, a private key of a user

[3] Plaintiff asserts that Defendant "has forfeited its chance to challenge the abstractness or conventionality of" the claims it did not specifically enumerate in its motion. [29 at 9.] That's not quite right—the memorandum accompanying the motion to dismiss [18] argued that "[a]ll of the '906 patent's claims are directed to the abstract idea of making different information available to different readers." [18 at 5.] It then argued that "in particular" the independent claims manifest this problem. *Id*. That is enough to save Defendant's arguments regarding the dependent claims. See, *e.g.*, *Epic IP*, 351 F. Supp. 3d at 750; *cf. Content Extraction and Transmission*, 776 F.3d at 1346 (affirming district court's invalidation 242 claims based on two representative claims).

may be used to encrypt the checksum and to obtain the integrity information so that using a public key of that user serves for verifying the checksums and, thus, the data content."). Thus, claim 2 does not even assert a particular encryption method, let alone an inventive one; rather it contemplates the use of any one of several conventional approaches and algorithms. This claim merely recites "generalized steps to be performed on a computer using conventional computer activity," and therefore lies solely within the realm of abstract ideas. *Enfish*, 822 F.3d at 1336, 1338.

Likewise, Plaintiff points to claim 6's use of a "chunk table" to assign metadata regarding the location of checksums as sufficiently concrete to render the '906 patent eligible. [29 at 8]; see also '906 patent at 5:1–4 ("Within the control section **330**, a chunk table may be provided indexing or pointing to, in one embodiment in terms of logical sector numbers, data blocks and associated checksum information.") As explained above, the concepts of file storage, indexing, and retrieval have been around for centuries and are, without more, abstract. *Erie Indemnity*, 850 F.3d at 1327. The '906 patent does not identify a limitation in extant chunking technology, nor does it purport to improve chunking—it simply implies that a chunk table is one option that "may be" used to index the checksum data. '906 patent at 5:1–4. In fact, *each* of the dependent claims are abstract, because they all recite "generalized steps to be performed on a computer using conventional computer activity." *Enfish*, 822 F.3d at 1338. Nothing in the '906 patent recites any purported technological improvement for encryption [claim 2], optical disks [claims 3 and 8], shadow recordkeeping [claim 4], binary indicators [claim 5], chunk tables [claim 6], or writing data to a storage device [claim 7].

The Court's conclusion that the patent is directed at an abstract idea is buttressed by the policy rationale underlying the *Alice/Mayo* test—namely, the desire to foreclose patents that would

preempt entire fields. The facts of Dell's alleged infringement illustrate the broad possibilities for preemption inherent in the '906 patent. The patent's specification includes the following explication of the problem to be solved by the patent: "Conventional data administration concepts lack the possibility for users to allow other users to verify or integrity check data." '906 patent at 1:27–29. Plaintiff elaborates in the complaint that the problem to be solved is "ensuring the validity or consistency of data in a storage medium." [1 at ¶12.] And in the briefing, Plaintiff repeatedly argues that the invention claimed in claim 1 enables "other users to securely verify" an owner's data. [29 at 1, 2, 6, 7.] Yet, there is no indication in the complaint that Defendant's alleged infringement does anything of the sort: Dell's alleged infringement is for "the purposes of deduplication," not for verifying or integrity checking data. [1, ¶ 14.] Likewise, Dell's allegedly infringing systems do not share checksum data with other users, or even securely, and instead use checksum data to de-duplicate and retrieve commonly used files more efficiently. [1, ¶¶ 15–20.] Indeed, Defendant's alleged infringing behavior consists solely of (1) algorithmically computing checksums [1, ¶ 16], (2) storing checksum data [1, ¶ 17], and (3) internally reading the checksum data disaggregated from the underlying data [1, ¶ 19–20]—all of which are generic and conventional uses of computers. The Court is left to conclude that, from Plaintiff's perspective, any technology that generates checksums, stores them, and then cross-references them with the underlying data would infringe this patent.

B. *Alice/Mayo* Step 2

Because the Court has concluded that the '906 patent is directed to an abstract idea, it must turn to step 2 of the *Alice/Mayo* test, the search for an inventive concept. As the Supreme Court explained in *Alice*, the "inventive concept" must be "significantly more than a patent upon the [ineligible concept] itself." 573 U.S. at 218 (quotation marks and citation omitted, and alteration

in original). "[T]ransformation into a patent-eligible application requires more than simply stat[ing] the [abstract idea] while adding the words 'apply it.' " *Id*. at 221 (quotation marks and citation omitted, and alterations in original). In a similar vein, merely limiting claims to a particular subfield or application "is, without more, insufficient to transform them into patent-eligible applications of the abstract idea at their core." *Electric Power*, 830 F.3d at 1354 (collecting cases). " 'Implementing the abstract idea with routine, conventional activity' * * * is not sufficient to save otherwise abstract claims." *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1373 (Mem) (Moore, J., concurring in denial of rehearing en banc) (Fed. Cir. 2018) (quoting *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014)). Put another way, claims that "do not require an arguably inventive set of components or methods, such as measurement devices or techniques" or "a new source or type of information, or new techniques for analyzing it" do not contain inventive concepts. *Electric Power*, 830 F.3d at 1355. "[A]dding a degree of particularity through additional limitations does not render dependent claims patent-eligible if the additional limitations merely add further insignificant details and do not convert otherwise patent-ineligible subject matter into a patent-eligible invention." *Epic IP*, 351 F. Supp. 3d at 750 (collecting cases).

The Court must examine "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 217–18 (quoting *Mayo*, 566 U.S. at 79, 73) (quotation marks omitted). When determining whether a claim is inventive, the reviewing court must consider how each claim uses an assertedly inventive or unconventional approach to solve the identified problem. *Berkheimer*, 881 F.3d at 1370–71. In *Berkheimer*, the Federal Circuit considered a series of patent claims related to "digitally processing and archiving files in a digital asset management system." *Id*. at 1362. The patent purported to "increase[] efficiency and

computer functionality over prior art systems" by implementing an inventive "one-to-many editing process." *Id*. at 1369. Some of the claims did not "capture the purportedly inventive concepts" outlined in the specification (to wit, the one-to-many editing process) and thus "amount[ed] to no more than performing the abstract idea of parsing and comparing data with conventional computer components." *Id*. at 1370. In contrast, the Federal Circuit found that the battery of claims pertaining to the purportedly inventive idea of the "one-to-many editing process" arguably contained inventive concepts (and could therefore survive summary judgment): "The improvements in the specification, *to the extent they are captured in the claims*, create a factual dispute * * *." *Id*. (emphasis added); see also *SAP America*, 898 F.3d at 1169–70 ("[I]t is clear, from the claims themselves and the specification, that these limitations require no improved computer resources [plaintiff] claims to have invented, just already available computers, with their already available basic functions.").[4]

The Court now turns to '906 patent. On its own terms, the patent was motivated by several deficiencies in the prior art: "Conventional data administration concepts lack the possibility for

[4] The Federal Circuit's decision in *Berkheimer* has rapidly transformed patent-eligibility analysis under § 101. See, *e.g.*, *Berkheimer*, 890 F.3d at 1377 n.3 (Reyna, J., dissenting from denial of rehearing en banc) (collecting reactions); *id*. at 1374 (Lourie, J., concurring in denial of rehearing en banc) ("[T]he law needs clarification by higher authority, perhaps by Congress."); see also *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (potentially extending *Berkheimer*). The tension lies in the fact that *Berkheimer* concedes that "[p]atent eligibility under 35 U.S.C. § 101 is ultimately an issue of law," *Berkheimer*, 881 F.3d at 1365, but elsewhere explains that the *Alice/Mayo* step 2 inquiry into "whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Id*. at 1368. As explained in this section and below, the entire *Berkheimer* opinion makes clear that not all questions regarding conventionality are questions of fact. Rather, at most, *Berkheimer* requires that the Court take all specific assertions of inventiveness as true; "to the extent they are captured in the claims," the Court cannot wade into the factual dispute, but when the claims do not concern the inventive concept or are simply the abstract idea itself, the Court may determine patent eligibility as a matter of law. See *id*. at 1369–70 (holding claims patent ineligible under § 101 where specification did not assert inventiveness); *SAP America*, 898 F.3d at 1168–70 (holding claims patent ineligible when they merely recite abstract concepts or do not purport to be inventive); see also *WhitServe LLC v. Donuts Inc.*, 390 F. Supp. 3d 571, 580–81 (D. Del 2019) (distinguishing *Berkheimer* along similar lines).

users to allow other users to verify or integrity check data. Especially when using storage media that season and tend to become more and more erroneous with time it is a problem that at some point one can no longer be sure of the data validity or consistency, *i.e.* if the data can still be retrieved correctly from such a medium. Moreover conventional storage concepts and storage media do not allow to verify an origin of data." '906 patent at 1:27–36. It then explains how applications of its proposed invention might work: "Embodiments of the present invention therefore provide the advantage that data can be verified, and a user can be pre-vented from working with broken data. Moreover, an effective mechanism is enabled to verify an origin of data stored on a storage medium." '906 patent at 2:39–43. Or, as Plaintiffs explain in their briefing, "The claims capture the inventive concept of allowing another user to securely verify the integrity of an owner's data content." [29 at 1.]

Even taking these assertions of inventiveness as true, the three independent claims of the '906 patent do not contain any arguably or purportedly inventive features. That is, Claims 1, 9, and 10 respectively boil down to an apparatus, method, and program for (1) providing checksums and (2) writing checksums into various locations in the computer's memory such that they can be read separately from the original input data. That is to say, *none* of the purportedly inventive functionalities listed in the specification, the complaint, or even the briefing is found in the claims. First, looking at each element separately, the patent endorses using "conventional algorithms" to compute checksums, effectively conceding that this element lacks an inventive concept. '906 patent at 3:3. The provider lacks an inventive concept because it does not claim "a new source or type of information, or new techniques for analyzing it." *Electric Power*, 830 F.3d at 1355. The specification also does not contemplate the prior art's inability to write data to a storage device or in such a way that different data streams could be segregated. Nor does the patent describe any

purportedly inventive method of writing information to a storage disk.[5] And the specification does not describe how the writer solves the problem of lack of *verification* capabilities.

In addition, the combination of the elements in these claims is far from inventive: Computers have long been able to *both* calculate and store data. Combining those two functions does not an invention make—and the '906 patent does not even attempt to claim otherwise. Indeed, the core claim of this patent has little to do with the purported inventive concepts regarding verification and authentication—it merely provides a mechanism for "performing the abstract idea of" computing algorithms and storing output "with conventional computer components." *Berkheimer*, 881 F.3d at 1370. In other words, the patent's claims and specifications, taken together, contain "no factual allegations from which one could plausibly infer that they are inventive." *SAP America*, 898 F.3d at 1169.

Turning to the dependent claims, it is well established that "adding a degree of particularity through additional limitations does not render dependent claims patent-eligible if the additional limitations merely add further insignificant details and do not convert otherwise patent-ineligible subject matter into a patent-eligible invention." *Epic IP*, 351 F. Supp. 3d at 750 (collecting cases). Here, the '906 patent does not purport to invent or utilize any unconventional method for any of the dependent claims. For example, claim 2 provides that the checksums should be capable of encryption, but does not explicate any purportedly ingenius advancement in encryption

[5] To be sure, the patent does have the following oblique specification: "In one application, [verification] is accomplished by storing a checksum over each file that is recorded on an optical disc in a file system independent way." '906 patent at 2:36–38; see also [1, ¶ 10 (parroting same)]. Even assuming the '906 patent claimed this mechanism, such an "invention" closely resembles a file-system independent version of the "shadow accounts" that *Alice* dismissed as mere, uninventive "electronic recordkeeping—one of the most basic functions of a computer." *Alice*, 573, U.S. at 225. Moreover, the '906 patent does not allege that file system independence was little used, nor does it proclaim any purported benefit to independence or even that it takes an ingenius approach, further militating against a finding of inventiveness. Plaintiff has not advanced any argument about this application in its briefing, so the Court is bereft of any explanation as to how this basic system is inventive.

technology. Merely saying, "encrypt it" is just an application of the abstract idea of encryption itself and is therefore patent ineligible. See *Alice*, 573 U.S. at 221; *Berkheimer*, 890 F.3d at 1374 ("the 'inventive concept' cannot be the abstract idea itself"). Likewise, claiming encryption for a subset of existing types of metadata is not an inventive concept. *Electric Power*, 830 F.3d at 1354 ("Most obviously, limiting the claims to the particularly technological environment of power-grid monitoring is, without more, insufficient to transform them into patent-eligible applications of the abstract idea at their core."). Moreover, as with the "provider," the claimed encryption technology appears to contemplate using any one of many extant methods or keys. See, *e.g.*, '906 patent at 4:14–19 (providing examples of types of encryption); *SAP America*, 898 F.3d at 1170 ("[N]either the claims nor the specification call for any [technology] different from those available in existing systems.").

Likewise, the patent does not purport to invent a new kind of chunk table—or even a new use for them. "Use a chunk table" to index information on a computer is not an inventive concept—even by the terms of the '906 patent itself. *Id*.; *s*ee also *Alice*, 573 U.S. at 221. That is, the '906 patent fails to recite any "factual allegations from which one could plausibly infer" that the use of chunking is inventive. *Id*. at 1169. The same goes for the remaining dependent claims: the patent does not suggest that the use of optical disks [claims 3 and 8], shadow recordkeeping [claim 4], binary indicators [claim 5], or writing data [claim 7] in computing is inventive—these are simply standard functions and components of "already available computers, with their already available basic functions." *Id*. at 1169–70.[6]

[6] The Court need not consider whether data verification undertaken with checksums is an inventive idea, because, as mentioned above, the patent does not claim any mechanism or method for verifying or authenticating data. That said, the *Berkheimer* court has explained that "the abstract idea of parsing and comparing data with conventional computer components" lacks an inventive concept. *Berkheimer*, 881 F.3d at 1370. The Court is therefore skeptical that the '906 patent would embody an inventive concept even if it included verification and authentication components—which it does not. See *id*. at 1369–70

C. Appropriateness of dismissal

Plaintiff offers two further arguments against dismissal: (1) inventiveness is necessarily a question of fact and therefore 12(b)(6) motions must be denied, and (2) multiple terms are disputed, so the Court must delay ruling on this motion until it has construed those disputed terms. Each of these unpersuasive arguments is addressed in turn.

1. *Berkheimer*

Plaintiff seems to contend that any assertion of inventiveness immunizes the complaint from 12(b)(6) dismissal—or even summary judgment. [29, at 11 (discussing *Berkheimer*, 881 F.3d).] According to Plaintiff, "[d]ismissal in the face of this genuine factual dispute over an unconventional inventive feature is [] improper." *Id*. But *Berkheimer* itself explained that "[p]atent eligibility has in many cases been resolved on motions to dismiss or summary judgment. Nothing in this decision should be viewed as casting doubt on the propriety of those cases." *Berkheimer*, 881 F.3d. at 1368; see also *SAP America*, 898 F.3d at 1166 (Fed. Cir. 2018) (dismissing patent infringement counts on § 101 grounds post-*Berkheimer*). Indeed, *Berkheimer* and *Aatrix* "leave untouched the numerous cases from [the Federal Circuit] which have held claims ineligible because the only alleged 'inventive concept' is the abstract idea." *Berkheimer*, 890 F.3d at 1373 (Mem) (Moore, J., concurring in denial of rehearing en banc) (Fed. Cir. 2018). More to the point, *Berkheimer* itself granted summary judgment, ruling several patents invalid under § 101, explaining that when a claim neither embodies an inventive concept nor purports to be unconventional, it is patent-ineligible. *Berkheimer*, 881 F.3d at 1369–70; see also *SAP America*, 898 F.3d at 1168–69 (affirming dismissal because claims lacked inventive concept in that "they

(claim can survive summary judgment when specification explicitly explains how the inventive feature functions and improves upon prior art systems); see also *Lexmark*, 387 F.3d at 531 (describing a checksum-based method for allowing users to verify, authenticate, and "integrity"-check printer files downloaded from an external source).

are themselves abstract[,] or there are no factual allegations from which one could plausibly infer that they are inventive.").

As explained above, even the strongest reading of *Berkheimer* requires only that the Court take the patent's purported inventive improvements as true "to the extent they are captured in the claims." *Id*. at 1370. The '906 patent is thus a far cry from those that withstood summary judgment in *Berkheimer*. Here, none of the technologies claimed in the patent are assertedly inventive, and the "invention" as a whole does not address the underlying problem of users' inability to verify or integrity check other users' data. Moreover, the patent explicitly or implicitly concedes that it employs conventional methods in each of its elements. The only claim and claim element that arguably is relevant to the inventive solution—allowing secured external verification—is claim 2. Though this claim *mentions* encryption, no part of the patent even asserts any purportedly inventive encryption technology or limitation in preexisting encryption arts; instead it seems to reference a variety of extant forms of encryption at an entirely abstract level. See '906 patent at 4:14–19; see also *Berkheimer*, 881 F.3d at 1170. In other words, since the patent itself raises no factual dispute as to the inventiveness of checksum computation and writing technology, dismissal pursuant to a Rule 12(b)(6) motion is appropriate, even after *Berkheimer* and *Aatrix*. See *Epic IP*, 351 F. Supp. 3d at 751–52.

2. Claim construction

Finally, Plaintiffs contend that dismissal is inappropriate, because the Court has not yet construed the claim. As noted above, however, "claim construction is not an inviolable prerequisite to validity determinations under § 101." *Genetic Technologies*, 818 F.3d at 1374. As Judge Bryson has explained, ruling on a 12(b)(6) motion before formal claim construction may be "both feasible and appropriate" where "the claims are straightforward and not technical in nature,

and plaintiff's counsel has not pointed to any terms from the asserted claims that would likely give rise to a material dispute over claim construction." *Epic IP*, 351 F. Supp. 3d at 752. Should there be a disputed term, however, the Court must adopt the construction of the non-moving party at this stage of proceedings. *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016).

Plaintiff says that the terms "enhanced reader," "baseline reader," and "control information" are disputed. [29 at 12.] Turning first to the readers, Plaintiff proffers no proposed construction of either term. Construction of these terms (referring to unclaimed, post-solution devices) is unlikely to give rise to a material dispute over claim construction, especially given the Federal Circuit's counsel that "collecting information, *including when limited to particular content* (which does not change its character as information) [is] within the realm of abstract ideas." *Electric Power*, 830 F.3d at 1353 (emphasis added); see also *id*. at 1355 ("But merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes," and is therefore lacking an inventive concept.)

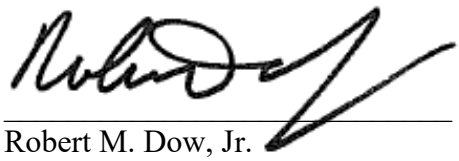
Plaintiff's construction of "control information" does not change the Court's analysis, either. According to Plaintiffs, control information "may comprise information of a physical or logical location of the first checksum information or the first encrypted checksum information." [29 at 4 n.1 (quoting '906 patent at 4:45–50).] Putting aside whether this permissive definition limits the universe of data comprising "control information," the Court still concludes that this is an uninventive application of an abstract concept. "[O]rganizing and accessing records" by describing where they are "includes longstanding conduct that existed well before the advent of computers and Internet." *Erie Indemnity*, 850 F.3d at 1327 (finding patent invalid as uninventive

application of abstract concept). The '906 patent does not assert an inventive means of identifying the first checksum's location, an inventive approach to classifying and identifying data, or that a computer's ability to recall data's location will solve the problems described in the specification. Nor could it, and thus Plaintiff cannot avail itself of the protection of our nation's patent laws. See 35 U.S.C. § 101, *et seq*.

IV. Conclusion

For the reasons explained above, Defendant's motion to dismiss for failure to state a claim [15] is granted and Plaintiff's complaint is dismissed without prejudice. Plaintiff is granted leave to file an amended complaint no later than October 28, 2019. The case is set for further status on November 7, 2019 at 9:00 am.

Dated: September 30, 2019



Robert M. Dow, Jr.
United States District Judge