

United States District Court
Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

PERSONALWEB TECHNOLOGIES LLC,
Plaintiff,
v.
GOOGLE LLC, et al.,
Defendants.

Case No. [5:13-cv-01317-EJD](#)
Re: Dkt. No. 361

PERSONALWEB TECHNOLOGIES LLC,
Plaintiff,
v.
FACEBOOK INC.,
Defendant.

Case No. [5:13-cv-01356-EJD](#)
Re: Dkt. No. 85

PERSONALWEB TECHNOLOGIES LLC,
et al.,
Plaintiffs,
v.
EMC CORPORATION, et al.,
Defendants.

Case No. [5:13-cv-01358-EJD](#)
Re: Dkt. No. 78

**ORDER GRANTING DEFENDANTS'
MOTION FOR JUDGMENT ON THE
PLEADINGS**

Plaintiff PersonalWeb Technologies LLC owns a family of patents that claim methods for reliably identifying, locating, and processing data in a computer network. Plaintiff alleges that Defendants infringed three of these patents. Defendants argue that Plaintiff's patents are invalid pursuant to 35 U.S.C. § 101. The Court finds this motion suitable for consideration without oral

Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS' MOTION FOR JUDGMENT ON THE PLEADINGS

argument. *See* N.D. Cal. Civ. L.R. 7-1(b). Having considered the Parties’ papers, the Court **GRANTS** Defendant’s motion for judgment on the pleadings.

I. BACKGROUND

A. Factual Background

Plaintiff argues that Defendants (collectively or separately) infringed U.S. Patent No. (“the ’310 patent”), No. 6,415,280 (“the ’280 patent”), and No. 7,949,662 (“the ’662 patent”). The three patents at issue are part of a larger family of patents that Plaintiff calls the “True Name” patents. The patents are aimed at combatting the problems of data storage on larger networks. As computer networking and storage systems evolve, files can be divided and stored across different devices in dispersed locations. This created problems—different users can unknowingly give identical names to identical files. The inventors of the “True Name” patents patented a solution; they developed a system that replaces conventional file names with unique content-based identifiers. This is done by applying a “hash function” (a mathematical algorithm) to the data in each file. For instance, as described in the ’310 patent, an item’s unique content creates a unique identifier. A myriad of data items can be used to create the unique identifier, which ensures duplicate copies are not created. *See, e.g.*, ’310 patent, (2:18–21) (“[A] data item may be the contents of a file, a portion of a file, a page in memory, an object in an object-oriented program, a digital message, a digital scanned image, a part of a video or audio signal, or any other entity which can be represented by a sequence of bits.”). The three patents acknowledge that the “True Name,” *i.e.* the assigned identifier, is intended for use with “existing” operating systems and “standard” data-management processes. *Id.* (6:26).

The ’310 Patent. The ’310 patent explains a method and apparatus for creating a unique data-identifier for each file based on the content of the data item. The identifier is independent of the data item’s user-defined name/location, which helps ensure duplicate copies are not created. The identifier for a particular data item is created by applying a cryptographic hash function to the data claim. The output of the hash function is the content-based identifier or “True Name,” which is “virtually guaranteed” to be unique to the data item. *PersonalWeb Techs., LLC v. Apple, Inc.*,

1 917 F.3d 1376, 1377–78 (Fed. Cir. 2019). The system uses the content-based identifier to
 2 determine whether a particular data item is present on the system. And, when the data item's
 3 contents are changed, the content-based identifier is also changed. The identifiers are then used to
 4 determine if access to a data item is licensed or authorized. *See, e.g.*, '310 patent (claims 24, 81,
 5 86).

6 Five claims of the '310 patent are at issue. Plaintiff contends Defendant EMC/VMware
 7 infringed claims 24 and 31 of the patent. Plaintiff alleges Defendants Google/YouTube,
 8 Facebook, and EMC/VMware infringed claims 81, 82, and 86 of the patent. The relevant claims
 9 of the '310 patent are as follows:

10 **24.** A computer-implemented method implemented at least in part by hardware comprising
 11 one or more processors, the method comprising:

12 (a) using a processor, receiving at a first computer from a second computer, a request
 13 regarding a particular data item, said request including at least a content-dependent name
 14 for the particular data item, the content-dependent name being based, at least in part, on at
 15 least a function of the data in the particular data item, wherein the data used by the function
 16 to determine the content-dependent name comprises at least some of the contents of the
 17 particular data item, wherein the function that was used comprises a message digest
 18 function or a hash function, and wherein two identical data items will have the same
 19 content-dependent name; and

20 (b) in response to said request:

21 (i) causing the content-dependent name of the particular data item to be compared
 22 to a plurality of values;

23 (ii) hardware in combination with software determining whether or not access to
 24 the particular data item is unauthorized based on whether the content-dependent
 25 name of the particular data item corresponds to at least one of said plurality of
 26 values, and

27 (iii) based on said determining in step (ii), not allowing the particular data item to
 28 be provided to or accessed by the second computer if it is determined that access to
 the particular data item is not authorized.

31. The method of claim **21**¹ wherein, for each particular data item of the plurality of data

¹ Claim 21 claims:

A computer-implemented method implemented at least in part by hardware comprising one or
 more processors, the method comprising:

(a) obtaining a list of content-dependent names, one for each of a plurality of data items, wherein,
 for each particular data item of the plurality of data items, the corresponding content-dependent

Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS' MOTION FOR JUDGMENT ON THE PLEADINGS

items, the corresponding content-dependent name for that particular data item was based on a function of all of the contents of that particular data item.

81. A device operable in a network of computers, the device comprising hardware including at least one processor and memory, to:

(a) receive, at said device, from another device in the network, a content-based identifier for a particular sequence of bits, the content-based identifier being based at least in part on a function of at least some of the particular sequence of bits, wherein the function comprises a message digest function or a hash function, and wherein two identical sequences of bits will have the same content-based identifier, and to

(b) compare the content-based identifier of the particular sequence of bits to a plurality of values; and to

(c) selectively allow said particular sequence of bits to be provided to or accessed by other devices depending on whether or not said content-dependent identifier corresponds to one of the plurality of values.

82. The device of claim 81 wherein the particular sequence of bits represent data selected from the group comprising: a file, a portion of a file, a page in memory, a digital message, a portion of a digital message, a digital image, a portion of a digital image, a video signal, a portion of a video signal, an audio signal, a portion of an audio signal, a Software product, and a portion of a software product.

86. A device operable in a network of computers, the device comprising hardware, including at least one processor and memory, to:

(a) receive at said device, from another device in the network, a digital identifier for a particular sequence of bits, the digital identifier being based, at least in part, on a given function of at least some of the bits in the particular sequence of bits, wherein the given function comprises a message digest function or a hash function, and wherein two identical sequences of bits will have the same digital identifier; and

(b) selectively allow the particular sequence of bits to be provided to or accessed by other devices in the system, based at least in part on whether or not the digital identifier for the particular sequence of bits corresponds to a value in a plurality of values, each of the

name for that particular data item is based at least in part on a function of at least Some of the contents of the particular data item, wherein the function comprises a message digest function or a hash function, and wherein two identical data items have the same content-dependent name on the list of content dependent names;

(b) receiving at a first location, and from a second location distinct from said first location, a content-dependent identifier corresponding to a particular data item, said content-dependent identifier being based at least in part on at least some of the contents of the particular data item;

(c) at said first location, by a processor, in combination with software, determining, based at least in part on said content-dependent identifier for said particular data item, and using said list of content-dependent names, whether a requestor may access the particular data item; and

(d) based on said determining in (c), if it is determined that the requestor may not access the particular data item, causing access to the particular data item to be denied.

Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS' MOTION FOR JUDGMENT ON THE PLEADINGS

plurality of values being based, at least in part, on the given function of at least some of the bits in a corresponding sequence of bits.

The '280 Patent. The '280 patent addresses a method of identifying and requesting data in a network using content-based identifiers. Specifically, it covers a situation where data items are distributed across a network of servers and some of the data items are cached (stored) versions from a source server. The content delivery network ("CDN") determines a "True Name," *i.e.* a content-dependent identifier, for a particular data item (as in the '310 patent). In response to a request for a particular data item, the CDN provides the particular data item from one of the servers in the network of servers.

Four claims of the '280 patent are at issue. Plaintiff contends Defendants Facebook, Google, and YouTube infringed claims 15 and 16. Plaintiff alleges Defendant Facebook infringed claims 31 and 31. The relevant claims of the '280 patent are as follows:

15. A method as in claim **10**² further comprising:

resolving the request for the particular data file based on a measure of availability of at least one of the servers.

16. A method as in claim **15** wherein the measure of availability is based on one or more of:

(a) a measurement of bandwidth to the Server;

(b) a measurement of a cost of a connection to the server, and

(c) a measurement of a reliability of a connection to the SCWC.

31. A content delivery method, comprising:

² Claim 10 claims:

A content delivery method, comprising:

distributing a set of data files across a network of servers;

determining a data identifier for a particular data file, the data identifier being determined using a given function of the data, wherein said data used by the given function to determine the data identifier comprises the contents of the particular data file; and

in response to a request for the particular data file, the request including at least the data identifier of the particular data file, providing the particular data file from a given one of the servers of the network of servers, said providing being based on the data identifier of the particular data file.

Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS' MOTION FOR JUDGMENT ON THE PLEADINGS

distributing a set of data files across a network of servers,

determining an **MD5** hash of the contents of a particular data file; and

in response to a request for the particular data file, the request including at least the **MD5** hash of the particular data file, providing the particular data file from a given one of the Servers of the network of Servers, Said providing being based on the **MD5** hash of the particular data file.

32. A method as in claim **31** further comprising: resolving the request for the particular data file based on a measure of availability of at least one of the servers.

The '662 Patent. The '662 patent addresses the de-duplication of data in a data-processing system. The invention describes systems and methods for deleting a particular copy of a data item when at least one other copy of the copy of the data item is available. The presence of another copy of the data item is determined based on a content-dependent identifier for the data item, which is calculated using the methods described in the '310 and '280 patents. A duplicate copy may be deleted if it is determined another copy exists elsewhere on another processor in the system. Plaintiff contends that Defendant Google/YouTube infringed claim 33 of the '662 patent. The relevant claim is:

33. A file system comprising:

(i) a plurality of servers to store file data as segments; and

(ii) first data that includes file identifiers for files for which the file data are stored as segments; and

(iii) second data that maps the file identifiers to the segments to which the file identifiers correspond; and

(iv) location data that identifies which of the plurality of servers stores which of the segments; and

(v) a table including file identifiers for files in the file system, said table including a corresponding status for at least some of the files in the file system,

(vi) at least one computer comprising hardware in combination with software and connected to the plurality of servers, the at least one computer programmed:

(A) to receive a request to delete a particular data item in the file system;

(B) to ascertain, in response to said request, a digital data item identifier corresponding to said particular data item, said particular data item consisting of an arbitrary sequence of bits consisting of a sequence of non-overlapping segments, each of said segments in said sequence being stored on multiple servers of the plurality of servers in the file system, said digital data item identifier being based at least in part on a given function

of the data comprising the particular data item, said given function comprising a hash function;

(C) to update an entry in said table corresponding to said particular data item to reflect deletion of said particular data item in the file system, said entry including at least said digital data item identifier of said particular data item.

B. Procedural History

In late 2013, after Plaintiff filed actions against Defendants in the Eastern District of Texas, Judge Davis issued a claim construction order. Dkt. 178 (5:13-cv-01317-EJD). In the order, Judge Davis construed terms in the claims at issue as follows:

1. *Data items*: “sequence of bits”
2. *Data files*: “a named data item(s)”
3. *Substantially unique identifier, Data identifier, True Name, Digital identifier, Data item identifier*: “an identity for a data item generated by processing all of the data in the data item, and only the data in the data item, through an algorithm that makes the identifier substantially unique”

Id. at 47.

The cases were subsequently transferred to the Northern District of California. Before transfer, EMC and VMware filed a series of petitions for *inter partes* review (“IPR”) with the Patent Trial and Appeal Board (“PTAB”) challenging the validity of the ’280 and ’662 patents. The IPRs also challenged the validity of the ’791, ’539, ’544, and ’096 patents, which are relevant to this case because these patents have identical specifications and priority dates to the three True Name patents at issue. The PTAB found in six separate decisions that it was known in the prior art to use content-based identifiers, based on “hashes” of data items, for the kinds of data-management tasks that Plaintiff claims. The PTAB determined many claims in the “True Name” patents were not novel and were thus invalid under 35 U.S.C. § 102. The PTAB determined:

1. Claims 1–4, 29–33, and 41 of the ’791 patent were invalid because the prior art (Woodhill’s backup procedures) already disclosed a method for detecting and avoiding duplicate binary object identifiers. *See* Declaration of Marissa A. Lalli in Support of Defendants’ Motion for Judgment on the Pleadings (“Lalli Decl.”), Ex. A at 39. The PTAB thus invalidated the claims in the ’791 patent that patented a method of using content-based identifiers to identify and access data items because Woodhill already

Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS’ MOTION FOR JUDGMENT ON THE PLEADINGS

outlined a method of using a binary hash³ algorithm to calculate a binary object identifier from the “content of the data” instead of “from an external or arbitrary source.” *Id.* at 15. Like Plaintiff’s claimed method, the identifier “changes when the contents of the binary object changes.” *Id.* at 16.

2. Claims 36 and 38 of the ’280 patent were invalid because the prior art (Woodhill’s self-auditing procedure) disclosed a method of using content-based identifiers to identify and request a data item based on the “hash of contents” of the data item. *Id.*, Ex. B at 17. As noted by Defendants’ expert, Dr. Clark, such an “operation was routine because it was old and well-known to identify and request objects using their identifiers.” *Id.*
3. Claim 30 of the ’662 patent was invalid because the prior art (Kantor’s method of identifying duplicate files) disclosed a method of using content-based identifiers, based on hash functions, to identify duplicate files. *Id.*, Ex. C at 9, 11, 15.
4. Claims 10 and 21 of the ’539 patent were invalid because prior art (Langer) already disclosed a method of accessing files in a network of computers. *Id.*, Ex. D at 20. Langer already disclosed a method of calculating a unique identifier for a file using an MD5 hash function on the contents of the component file, rather than the file’s location. *Id.*
5. Claim 1 of the ’544 patent was invalid because prior art (Woodhill) already disclosed a system for distributed storage management on a computer network system using binary object identifiers. *Id.*, Ex. E at 14. Claim 1 was invalid because it claimed a method of using content-based identifiers to compare files, which was already anticipated by Woodhill. *Id.* at 22.

The Federal Circuit affirmed these PTAB decisions. *Id.*, Ex. G. Accordingly, there is no dispute that it was known in the art to use content-based identifiers, based on “hashes” of data items, for data-management in multi-server computer networks.

Apple (who is not a Defendant in this action) filed a separate IPR challenging the ’310 patent. The PTAB held the asserted claims unpatentable as not novel. The Federal Circuit, however, reversed the PTAB’s findings and accepted Plaintiff’s argument that the prior art (the Woodhill system) did not inherently disclose comparing one content-based identifier with a plurality of identifiers. *PersonalWeb*, 917 F.3d at 1382–83. Rather, the prior art only disclosed a one-to-one comparison. *Id.* at 1382. Thus, Plaintiff could claim a method of comparing one content-based identifier with multiple identifiers without violating 35 U.S.C. § 102.

³ The True Name patents use the terms “hash” and “message digest” interchangeably. ’310 (40:12). “Message digest” functions (like MD5) are a type of hash function. 12:43–46).

While the Federal Circuit held that the claims in the '310 patent were novel, the court acknowledged that many claims in Plaintiff's True Name patents were invalid since the prior art disclosed a system for (1) using content-based identifiers, (2) calculated using the contents of a data item,⁴ (3) which are stored with certain other information, in a binary object identification record, (4) to perform file-management functions, like backing-up files or restoring systems, (5) which check to see if binary objects have changed since the system's most recent backup, and (6) control access to data items stored in a repository by granting authorization to digital works via a "digital ticket" that identifies whether a user is entitled access to a file. *PersonalWeb Techs. v. Apple, Inc.*, 848 F.3d 987, 989 (Fed. Cir. 2017).

Defendants now argue that the asserted claims of the '310, '280, and '662 "True Name" patents are abstract and not eligible for patent protection under 35 U.S.C. § 101. Defendants' Motion for Judgment on the Pleadings ("Mot."), Dkt. 361; *see also* Reply in Support of Defendants' Motion for Judgment on the Pleadings ("Reply"), Dkt. 364. Plaintiff argues in opposition that the asserted claims are not abstract and are protected under Section 101. Plaintiff's Opposition to Defendants' Motion for Judgment on the Pleadings ("Opp."), Dkt. 362. Because Section 101 challenges are not available in IPRs, the True Patents' eligibility on this ground has not yet been decided. *Neptune Generics, LLC v. Eli Lilly & Co.*, 921 F.3d 1372, 1378 (Fed. Cir. 2019); 35 U.S.C. § 311(b) (stating that in an IPR, a petitioner is limited to grounds that "could be raised under section 102 or 103"). The Court now decides whether the asserted claims are protected by Section 101.

II. LEGAL STANDARD

A. Motion for Judgment on the Pleadings

A motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c) is a "means to challenge the sufficiency of the complaint after an answer has been filed." *New.Net*,

⁴ Dr. Clark explained that content-based identifiers are created by "hashing" the contents of a data item so that identical items have the same identifier. Dr. Robert Dewar conceded in his deposition that this concept was disclosed in the prior art that was the focus of the IPRs. Declaration of Marissa A. Lalli in Support of Reply ("Lalli Reply Decl."), Ex. H at 136.

Inc. v. Lavasoft, 356 F.Supp.2d 1090, 1115 (C.D. Cal.2004). The standard is functionally identical to a motion to dismiss. *Dworkin v. Hustler Magazine, Inc.*, 867 F.2d 1188, 1192 (9th Cir. 1989). On a Rule 12(c) motion, disputed material facts preclude judgment. *Hal Roach Studios, Inc. v. Richard Feiner and Co., Inc.*, 896 F.2d 1542, 1550 (9th Cir.1990) (“Judgment on the pleadings is proper when the moving party clearly establishes on the face of the pleadings that no material issue of fact remains to be resolved and that it is entitled to judgment as a matter of law.”). In deciding such a motion, the Court may consider the pleadings, documents incorporated by reference in the pleadings, and matters of judicial notice. *Heliotrope Gen., Inc. v. Ford Motor Co.*, 189 F.3d 971, 981 n.18 (9th Cir. 1999) (“When considering a motion for judgment on the pleadings, this court may consider facts that ‘are contained in materials of which the court may take judicial notice.’” (citation omitted)).⁵

B. Conversion

Plaintiff argues the Court should convert Defendants’ motion for judgment on the pleadings into one for summary judgment. This would allow the Court to consider the concurrently filed Declaration of Dr. Samuel Russ, Ph.D. Defendants object and argue, in the alternative, that if the Court converts the motion into one for summary judgment, it should defer deciding the motion until Defendants can depose Plaintiff’s expert, present their own evidence, and brief an argument under the summary judgment standard. Reply at 15 n.11.

Federal Rule of Civil Procedure 12(c) provides that a motion for judgment on the pleadings may be filed “[a]fter the pleadings are closed—but early enough not to delay trial[.]” “Conversion to summary judgment is generally not appropriate where . . . only the nonmoving party has introduced evidentiary exhibits in response to . . . a motion for judgment on the pleadings.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 2016 WL 4373698, at *4 (D. Del. Aug. 15, 2016) (collecting cases). Generally, a district court should give parties notice of its intent to convert a motion for judgment on the pleadings into a motion for summary judgment.

⁵ The IPR materials cited by Defendants and Plaintiff are subject to judicial notice. See *Atlas IP LLC v. Pac. Gas & Elec. Co.*, 2016 WL 1719545, at *1 n.1.

1 *James v. Poole*, 2013 WL 132492, at *2 (W.D.N.Y. Jan. 9, 2013).

2 Plaintiff argues that, in the interest of fairness and timing, the lengthy duration of the
3 litigation and the fact that discovery is nearly closed support converting Defendants' motion into
4 one for summary judgment. Opp. at 9. In Plaintiff's view, the Court should not sanction
5 Defendants' "tactical" use of a Rule 12(c) motion. Opp. at 10–11. Plaintiff also argues that
6 because genuine issues of material fact exist, judgment on the pleadings is improper.

7 Defendants object to conversion and contend that Plaintiff's use Dr. Russ to "manufacture
8 a factual dispute." Reply at 14, 15. They point to the fact that despite the length of litigation, Dr.
9 Russ has never been involved in the case. Defendants also argue Dr. Russ's declaration does not
10 create a genuine issue of material fact because the declaration is directly contrary to multiple
11 PTAB findings and Federal Circuit rulings. Hence, the purported disputes are not genuine and do
12 not preclude a Rule 12(c) motion.

13 The Court declines to convert the motion into one for summary judgment. Conversion to
14 summary judgment is generally not appropriate when, as here, only the nonmoving party has
15 introduced evidentiary exhibits in response to a motion for judgment on the pleadings. *See Two-*
16 *Way Media Ltd.*, 2016 WL 4373698 at *4. Only Plaintiff, the nonmovant, has introduced
17 evidence not subject to judicial notice. Furthermore, conversion is only appropriate where a party
18 has notice. *See James*, 2013 WL 132492 at *2. Here, Defendants did not have notice of
19 conversion. At a joint conference, the Court instructed Defendants to file a joint motion for
20 judgment on the pleadings. Plaintiff neither objected to this nor indicated it intended to convert
21 the motion into one for summary judgment. *See* Transcript of Proceedings, Dkt. 133 (parties only
22 discussed a Rule 12(c) motion with the Court). Reneging on this discussion and converting the
23 motion into one for summary judgment would produce waste—the Court would have wasted its
24 time in discussing a Rule 12(c) motion with the Parties and Defendants would have wasted their
25 time preparing Rule 12(c) briefing. *See* Reply at 15 n.11.

26 Plaintiff's timeliness argument is unconvincing. The fact that these cases have been
27 pending for nearly six years is obviated by the multiple IPRs and Federal Circuit appeals. Indeed,

28 Case No.: [5:13-cv-01317-EJD](#)

ORDER GRANTING DEFENDANTS' MOTION FOR JUDGMENT ON THE PLEADINGS

once these IPRs and appeals concluded, Defendants immediately filed their Rule 12(c) motion. *See Richter*, 2018 WL 6728515 at *6. Given this timeline and the fact that no trial date is set, the motion was filed “early enough not to delay trial.” Fed. R. Civ. P. 12(C). The motion is thus timely. The Court thus fails to see how Rule 12(c) is being “tactically used” when Defendants brought the motion at the earliest opportunity.

Finally, to the extent factual disputes exist, neither the summary judgment nor motion for judgment on the pleadings standard allow this Court to find for Defendants. Accordingly, Plaintiff’s request for conversion is **DENIED** and Dr. Russ’s declaration will not be used.

III. DISCUSSION

Patent eligibility under 35 U.S.C. § 101 is a question of law that may contain underlying issues of fact. *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015); *see also Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018). Hence, when the “basic character of the claimed subject matter is readily ascertainable from the face of the patent,” courts may determine patent eligibility at the motion for judgment on the pleadings stage. *See Internet Patents Corp. v. Gen. Auto. Ins. Servs., Inc.*, 29 F. Supp. 3d 1264, 1268 (N.D. Cal. 2013).

Under 35 U.S.C. § 101, the scope of patentable subject matter includes “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quotation marks and citation omitted). These three exceptions are “the basic tools of scientific and technological work” and monopolization of these tools “might tend to impede innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws.” *Id.* (quotation marks and citation omitted).

In three recent cases, the Supreme Court has established a legal framework for determining if an exception applies. *See Bilski v. Kappos*, 561 U.S. 593 (2010); *Mayo Collaborative Servs. v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012); *Alice Corp.*, 573 U.S. 208. As elaborated in

Alice, the § 101 eligibility inquiry proceeds in two steps. *Alice Corp.*, 573 U.S. at 217–18. First, the court determines whether the patent(s) at issue are directed to an abstract idea, law of nature, or natural phenomenon. *Id.* at 217. If the court determines the patent(s) do not cover an excepted subject matter, the inquiry ends. *Id.* If, however, the patent(s) *do* focus on one of these categories, the court proceeds to the second step, where it determines if “the elements of each claim both individually and ‘as an ordered combination’ . . . ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo Collaborative Servs.*, 566 U.S. at 78). If the claims fail to provide this “inventive concept,” the patent is ineligible. *Id.* at 217–18.

Accordingly, the Court must first decide whether the three True Name patents at issue cover an excepted subject-matter, *i.e.* an abstract concept, and, if yes, whether an “inventive concept” exists.

A. *Alice*/Mayo Step One

1. Foundational Background

At step one of the *Alice* framework, the Court “look[s] at 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 Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). Courts must be careful not to overgeneralize claims otherwise “all inventions can be reduced to underlying principles of nature.” *Diamond v. Diehr*, 450 U.S. 175, 189 n.12 (1981). On the other hand, the judicial inquiry should root out “creative drafting efforts” designed to “monopolize” the abstract idea. *See Alice*, 573 U.S. at 221. “In cases involving software innovations, this inquiry often turns on whether the claims focus on ‘the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.’” *Finjan, Inc. v. Blue Coat System, Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016)). Merely stating an “improved result” to an otherwise abstract idea is insufficient; the patent must recite a “specific means or method that solves a problem in an existing technological process.” *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1150 (Fed. Cir. 2019).

1 Accordingly, the relevant inquiry is *what* problem the patent claims to solve and whether the
2 patent *specifically* asserts a method to make improvements.

3 Four recent Federal Circuit cases, which Plaintiff relies on, illustrate the *Alice* step one
4 inquiry. In *Enfish*, the court held that a software patent covering a “self-referential database” did
5 not constitute an abstract idea. 822 F.3d at 1337–38. There, unlike the prior model of “relational
6 databases,” which generated multiple and separate data-tables for each entity, the plaintiff’s
7 patents claimed a self-referential model that allowed all of the information in a database to be
8 contained and displayed in a single table. *Id.* at 1330, 1337. Thus, the patents sought to improve a
9 concrete software-specific inefficiency that had existed in referential databases. This made the
10 patents different from cases like *Alice* where a patent-holder simply wanted to add conventional
11 computer components to well-known business practices. *Id.* at 1338. Because the self-referential
12 table was a *specific type of data structure* distinct from the abstract idea of improving the way a
13 computer stores and retrieves data in memory, the patent was not so sweeping that “general-
14 purpose computer components” could be added “post-hoc to a fundamental economic practice or
15 mathematical equation.” *Id.* at 1339; *cf. Alice*, 573 U.S. at 221 (noting that the judicial inquiry
16 should root out creative drafting designed to monopolize an abstract idea).

17 In *McRO, Inc. v. Bandai Namco Games America, Inc.*, the court held that the patent was
18 not abstract because the claims were limited to rules with specific characteristics. 837 F.3d 1299,
19 1313 (Fed. Cir. 2016). There, the patent at issue claimed a method of using a computer to
20 automate conventional activity. Specifically, the patent covered a method of accurately and
21 realistically syncing lip and facial expressions in animated characters. *Id.* at 1314. Previously, this
22 could only be produced by human animators. *Id.* It did this through an “ordered combination of
23 claimed steps, using unconventional rules that relate subsequences of phonemes, timings, and
24 morph weight sets.” *Id.* at 1302–03. The court focused its analysis on the specific rules claimed
25 in the patent—as in *Enfish*, the claimed process used a combined order of *specific* rules to resolve
26 a specific inefficiency, thereby obviating the fear that the patent covered an “entire abstract idea”
27 and could preempt all innovation in the field. *See id.* at 1314–15 (noting patent’s rules ensured

1 “future alternative discoveries were not foreclosed”).

2 In *Finjan*, the court held the patent was not abstract because the patent addressed a
3 software-based innovation prescribed by specific steps. 879 F.3d at 1303–06. There, the patent at
4 issue was directed to a method of providing computer security by scanning a downloadable
5 program and attaching results of that scan to the downloadable in the form of a “security profile.”
6 *Id.* at 1303. This operation is distinguished from traditional, “code-matching” virus scans that are
7 limited to recognizing the presence of previously-identified viruses. *Id.* at 1304. The claimed
8 method thus “constitute[d] an improvement in computer functionality.” *Id.* Much like in *Enfish*,
9 the virus improvement constituted a “non-abstract improvement to computer technology” because
10 it addressed a specific inefficiency, namely it “employ[ed] a new kind of file that enable[d] a
11 computer security system to do things it could not do before.” *Id.* at 1305. And, much like
12 *McRO*, the claims recited specific steps and thus claimed more than “a mere result.” *Id.*; *see also*
13 *Koninklijke KPN N.V v. Gemalto M2M GmbH*, 942 F.3d 1143, 1150 (Fed. Cir. 2019) (holding,
14 like in *Finjan*, claimed invention not abstract because it “employ[ed] a *new way* of generating
15 check data” (emphasis added)).

16 Contrast these cases with *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607
17 (Fed. Cir. 2016). There, the patent at issue related to an “apparatus for recording of a digital
18 image, communicating the digital image from the recording device to a storage device, and []
19 administering the digital image in the storage device.” *Id.* at 609. The claims were directed to
20 storing and organizing digital photos. *Id.* The court determined that the patent covered an abstract
21 idea because it did not claim any new technology or use of such technology. *Id.* at 612. Instead, it
22 “describe[d] the system and methods in purely functional terms” and failed to provide “any
23 technical details for the tangible components.” *Id.* The claims were “simply directed to the
24 abstract idea of classifying and storing digital images in an organized manner.” *Id.* at 613. Thus,
25 the patent, unlike the aforementioned cases, was abstract because the patent covered the
26 conventional application of known ideas. Indeed, the patent failed to describe any type of method
27 for improving software functionality or solving a specific technological problem. *Id.* at 613.

These cases stand for four principles: first, when claims recite purely functional language and use conventional technology in a typical manner, the claims are not patent eligible. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (affirming district court’s holding that patent was abstract because claims only focused on the combination of “abstract-idea processes” without adding any “particular assertedly inventive technology” or processes). Second, and relatedly, claims that merely recite steps people go through in their minds, or by mathematical algorithms, without more, are abstract mental processes. *See TLI*, 823 F.3d at 613 (holding that claims were abstract because they simply recited the abstract ideas of “classifying and storing digital images in an organized manner”). Third, as *Finjan* and *Enfish* show, eligibility requires some fixed subject-matter with fixed parameters. *See Finjan*, 879 F.3d at 1305–06 (holding patent was not abstract because it claimed a specific way to accomplish specific result). Finally, a result, even if innovative, is not patentable. *Id.* at 1305 (collecting cases). Only the specific steps that accomplish an innovative result are patentable. *Id.* These four principles reaffirm that preemption is at the heart of the *Mayo/Alice* analysis. By constraining patentability, courts aim to balance innovation and monopolization.

Accordingly, at step one, the inquiry must be: what a patent is “directed to?” This ensures that the patent seeks to resolve a specific problem through specific means, thus ensuring the field is not completely occupied and creativity is not preempted.

2. The '380, '280, and '662 Patents Are Directed to an Abstract Idea

The claims in the True Name patents at issue are directed to:

1. '310 patent: using a known, content-based identifier to control access to data.
2. '280 patent: retrieving and delivering copies of data items across a network of servers.
3. '662 patent: identifying copies of identical data items in a network of servers based on the data’s unique content-based identifier and deleting one of the duplicate data copies.

The Parties do not dispute this. *See Opp.* at 14, 24. Hence, the True Name patents, broadly construed, focus on the idea of using content-based identifiers to manage data in a computer system.

Even accepting this, Plaintiff argues that the True Name patents are not abstract. First, Plaintiff contends the claims are not abstract because “[n]othing like this existed at the time.” Opp. at 14. Alternatively, Plaintiff contends the patents cover a specific improvement in data-management, namely a method that identifies any variable sequence of bits within a network, based on the data file’s content, to more efficiently locate, access, and de-duplicate data in a network. *Id.* Finally, Plaintiff argues the claims do not simply recite a desired result, they “explain how [it] is done.” *Id.* at 15.

The Court disagrees with Plaintiff’s assessment. The three patents are all directed to the same abstract three-step process: (1) using a content-based identifier generated from a “hash or message digest function,” (2) comparing that content-based identifier against something else, *i.e.* another content-based identifier or a request for data; and (3) providing access to, denying access to, or deleting data. Collection, comparison, and access to information are abstract concepts. *See Elec. Power Grp.*, 820 F.3d at 1353–54; *see also Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (holding claims ineligible under Section 101 because they were drawn to abstract and well-known ideas of “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory”). As *Enfish*, *Finjan*, and *McRO*, show above, fundamental concepts may not be claimed; only the steps which go beyond the abstract concept are patent eligible.

Here, the patents claim the fundamental concept itself—they claim a method of accessing, storing, and deleting data in a multi-computer network system. And, the patents are not aimed at addressing a specific problem within data-management. Rather, they are aimed at generally making data-management more efficient. As an example, in *Enfish* the Federal Circuit held that the claim at issue was patentable under Section 101 because it focused on a specific improvement—the self-referential table—that helped computers better store and retrieve data. *Enfish*, 822 F.3d at 1335. The patent thus did not cover general data storage improvements; it covered the specific method claimed to create a self-referential table. This helped ensure the entire field of data storage and retrieval was not preempted, therefore maintaining the balance

1 between monopolization and innovation.

2 Likewise, in *KPN*, the Federal Circuit held that the asserted claims were patent eligible
3 because they were focused on clear, specific improvements to existing computer functions. 942
4 F.3d at 1153. There, the claimed invention was a system to “check data” to ensure that there were
5 not “systematic errors” with data transmission. *Id.* at 1145. The patent proposed adding
6 variability to the calculation of the check data by switching around bits in the data block or using
7 different algorithms. *Id.* at 1146. This, the court determined, was patentable because the patent
8 claimed only the specific steps of using a new “check data” system and thus only sought to solve a
9 specific problem within the check-data field. *Id.* at 1153. Hence, the patent was not directed at
10 data processing and transmission generally.

11 At step one, the Court broadly construes a patent’s purpose and asks what problem does
12 the patent seek to resolve? Using broad brushes, a commonality can be gleaned from each patent
13 discussed in the aforementioned cases. In each case, the patent-holder patented a new and specific
14 method to resolve a problem. For example: (1) in *Enfish*, a new type of table was claimed; (2) In
15 *KPN*, a new “check data” method was claimed; (3) in *McRO*, a new way to sync an anima
16 character’s facial expressions and speech was claimed; and (4) in *Finjan*, a new file-scanning
17 system was claimed. In contrast, here, no “new” system is claimed. The patents are generally
18 aimed at making data-storage in multi-computer networks easier and more efficient. Unlike
19 *Enfish*, *McRO*, *KPN*, and *Finjan*, the True Name patents do not claim a “new way” of storing,
20 accessing, or naming files. Indeed, the True Name patents cannot, and do not, claim the process
21 for generating a data-based identifier.⁶ Rather, they claim the process of “applying” such
22 identifiers to perform “particularly-recited data management operations.” *Opp.* at 15. But,
23 claiming the “application” of a well-known hashing technique to the abstract concept of data
24 management does not render the idea non-abstract. *See Bilski*, 561 U.S. at 612 (“[L]imiting an
25 abstract idea to one field of use or adding token postsolution components [does] not make the
26

27 ⁶ As noted above, this is prior art. *See supra* I.B.

concept unpatentable.”); *see also Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014, 1017 (Fed. Cir. 2017) (holding claims directed to “(1) receiving identity data from a device with a request for access to resources; (2) confirming the authenticity of the identity data associated with that device; (3) determining whether the device identified is authorized to access the resources requested; and (4) if authorized, permitting access to the requested resources” abstract because claimed abstract idea of “providing restricted access to resources”).

For instance, in *Bridge & Post, Inc. v. Verizon Communications, Inc.*, the court held that the claims “determining user information for a user” and “generating a user identifier from the determined user information” were unpatentable. 319 F. Supp. 3d 818, 822 (E.D. Va. 2018). The disputed claims in *Bridge & Post* covered “swapping a changeable identifier with an unchangeable one” and using the identifier to implement targeted marketing. *Id.* at 824–25. But targeted marketing and using “an unchangeable identifier” are abstract ideas. *Id.* at 825; *see also Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910 (Fed. Cir. 2017) (“There is no description of how the unique identifier is generated . . .”). Hence, applying abstract ideas to a specific concept does not render them non-abstract. *Bridge & Post, Inc.*, 319 F. Supp. 3d at 825.

Here, as in *Bridge & Post*, Plaintiff neither claims they invented the content-based identifier nor that their invention is computer-specific. Indeed, Plaintiff cannot argue either of these things—the content-based identifier is prior art and Plaintiff has sought to broadly enforce the True Name patents. *See supra* I.B.; Mot. at 4 n.4. As shown in Defendants’ briefing, the True Name patents have been asserted across a wide array of technologies like content-delivery networks, peer-to-peer music swapping, cloud storage and web applications. *Id.* This confirms that, broadly construed, the claims are directed at “generating, transmitting, receiving, and storing” data and are not directed at improving computer functionality in some concrete way. *See Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1258 (Fed. Cir. 2017) (“[W]e must . . . ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.”). Therefore, the claims are directed to the “basic concept” of data management, which is sufficient to fall under *Alice* step 1. *See TLI*, 823 F.3d at 613 (holding

claims directed to collecting data, recognizing certain data within the collected set, and storing the recognized data in memory were a “well-established basic concept”).

Finally, the Court notes Defendants’ argument that Plaintiff is “computerizing” a conventional process known in the art. Opp. at 15. Defendants argue that the concept claimed in the True Name patents is derivative of other data-management systems like the Dewey Decimal and Library of Congress Classification systems. Reply at 10. For example, librarians often locate books based on a “call system” where they assign books unique identifiers based on call numbers, which change dependent on a book’s volume, etc. Using a “master call list,” a librarian can compare the call numbers to see if multiple copies of the same text exist and purge books accordingly. Hence, Defendants argue that the True Name patents cover this well-known concept, except applied to computers. *See OIP Techs.*, 788 F.3d at 1362–63 (limiting abstract ideas to a particular environment does not make the claims less abstract in *Alice* step one).

In *OpenTV, Inc. v. Apple, Inc.*, the court held that the patent was abstract because it could not pass the “pen and paper test.” 2015 WL 1535328, at *4 (N.D. Cal. Apr. 6, 2015). There, one could use a pen, paper, and her own brain to perform the claimed steps of the patent. *Id.* The fact that the claims could be done without modern technology showed the patents were directed at “abstract ideas.” *Id.* Failing the “pen and paper test” indicates that a patent applies to an abstract concept, which means the patent-holder can monopolize entire fields of thought, thus hampering innovation. Here, as in *OpenTV*, the problem of how to store, organize, and access data is not new (see Dewey Decimal system). Hence, the purported solutions claimed in the True Name patents are not a uniquely technological problem and thus do not create solutions to computer-centric problems like the patents in *Enfish*, *McRO*, *KPN*, and *Finjan*. Accordingly, the Court holds the three True Name patents abstract under *Alice* step 1 and proceeds to step 2.

B. *Alice/Mayo* Step Two

At step two, the court examines the elements of the claims, both individually and “as an ordered combination” to determine if they contain an “inventive step” sufficient to “transform” the claimed abstract idea into a patent-eligible application. *Alice*, 573 U.S. at 221 (citing *Mayo*, 556

U.S. at 78–79). Step two is satisfied when the claim limitations “involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction*, 778 F.3d at 1347–48 (quoting *Alice*, 573 U.S. at 225). “If a claim’s only ‘inventive concept’ is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea.” *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290–91 (Fed. Cir. 2018). After identifying an ineligible concept at step one, the court asks at step two: “What else is there in the claims?” *Mayo*, 566 U.S. at 78.

The question of whether a claim element or combination is well-understood, routine, and conventional to a skilled artisan in the relevant field is a question of fact and thus any fact that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Notably, “[t]he mere fact that something is disclosed in a piece of prior art . . . does not mean it was well-understood, routine, and conventional.” *Id.* at 1369; *but see Va. Innovation Scis. Inc. v. Amazon.com, Inc.*, 227 F. Supp. 3d 582, 599 (E.D. Va. 2017) (“That is not to say that the §§ 102 and 103 analyses are completely irrelevant to the eligibility question.”); Reply at 10–11 (arguing that PTAB decisions invalidating claims based on novelty are persuasive); *see also supra* I.B. at 9 (discussing prior art).

The ’310 patent teaches the use of a “processor,” “network of servers,” data transfer, data “comparison,” and data access/restriction, based on a data item’s “content-based digital identifier,” which comprises a “message digest function or a hash function.” ’310 patent (claims 24, 31, 81, 82, and 86); *see id.* (claim 81) (discussing the use of a device comprising a “processor and memory” in a network of computers and data comparison). The ’280 patent teaches the use “requesting” a data file based on a network’s availability, which is determined by “measurement of” either the server, the cost of a connection to the server, or the reliability of a connection to the server, whereby data is delivered based on an “MD5 hash of the contents of a particular data file.” ’280 patent (claims 15, 16, 31, and 32); *see id.* (claim 31) (discussing a content delivery method where files are distributed across a network of servers where the request and receipt of a data file

1 is based on the file’s MD5 hash). Finally, the ’662 patent teaches the use marking duplicate files
 2 for deletion across a “plurality of servers” whereby location data, *i.e.* a data item’s unique content-
 3 based identifier, is used to determine duplicate files. ’662 patent (claim 33).

4 Plaintiff argues that the Court cannot decide patent eligibility at this stage because a factual
 5 dispute exists about what is routine and conventional in the art. Opp. at 20–21. Plaintiff further
 6 argues that Defendants have not shown by clear and convincing evidence that a person of ordinary
 7 skill in the art (“POSITA”) would have deemed the “ordered combinations” of elements in each
 8 claim to be “well-understood, routine, or conventional.” *Id.* at 21. Specifically, Plaintiff argues
 9 that the specifications disclose numerous “improvements” over the prior art like: (1) ensuring a
 10 system only stores one copy of any data item; (2) using data-identifiers to provide access to data
 11 while simultaneously using the identifier to ensure only appropriate persons access the data file;
 12 and (3) verifying that requested data is the correct data using only the data identifier. Opp. at 25–
 13 27. This, Plaintiff’s argue, shows that the patents claim an inventive use of hash functions and
 14 thus recite unconventional features that provide benefits over conventional prior art. *Id.* at 25
 15 (citing *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1378 (Fed. Cir. 2005) (“New uses of
 16 old products or processes are indeed patentable subject matter.”)).

17 The Court disagrees with Plaintiff; the asserted claims fail to provide an inventive concept.
 18 The relevant inquiry is “not whether the claimed invention as a whole is unconventional or non-
 19 routine.” *BSG*, 899 F.3d at 1290. Rather, the court assesses “whether the claim limitations *other*
 20 *than the invention’s use of the ineligible concept to which it was directed* were well-understood,
 21 routine, and conventional.” *Id.* (emphasis added). No “inventive concept” exists when an abstract
 22 idea is used in a conventional way. *Id.* at 1290–91.

23 A “hash identifier” uses extracted data to identify a specific data-file—it is a “generic and
 24 routine concept that does not transform the claims to a patent eligible application of the abstract
 25 idea.” *Smart Sys. Innovations, LLC v. Chi. Transit Auth.*, 873 F.3d 1364, 1375 n.9 (Fed. Cir.
 26 2017). Concepts like “comparing,” “restricting access,” and “de-duplicating” data are well-known
 27 and conventional functions of computers and data-management systems, as are “processors” and

“computer networks.” *See, e.g., Alice*, 573 U.S. at 226 (“But what petitioner characterizes as specific hardware—a ‘data processing system’ with a ‘communications controller’ and ‘data storage unit,’ . . . is purely functional and generic. Nearly every computer will include a ‘communications controller’ and ‘data storage unit’ capable of performing the basic calculation, storage, and transmission functions.”); *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (holding generic computer components like “interface,” “network,” and “database” do not satisfy the inventive concept requirement); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”); *TLI*, 823 F.3d at 611, 614–15 (holding that when claims use functional language and conventional technology, like a phone receiving data, extracting information from that data, and storing images, claims are not patent eligible); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1371 (Fed. Cir. 2015) (“Requiring the use of a ‘software’ ‘brain’ ‘tasked with tailoring information and providing it to the user’ provides no additional limitation beyond applying an abstract idea, restricted to the Internet, on a generic computer.”); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) (“We may assume that the techniques claimed are groundbreaking, innovative, or even brilliant, but that is not enough for eligibility.” (quotation marks and citation omitted)).

There is, in short, nothing “inventive” about any claim details, individually or in combination, that are not themselves abstract ideas. The claims are directed at “standard file management” functions. ’310 (6:28). Using a generic hash function, a server system, or a computer does not render these claims non-abstract; the claims are still directed to the abstract ideas of receiving, storing, deleting, and controlling access to data. *See BSG*, 899 F.3d at 1290–91. Hence, none of the hardware recited by the claims “offers a meaningful limitation beyond generally linking ‘the use of the [method] to a particular technological environment.’” *Alice*, 573 U.S. at 226 (quoting *Bilski*, 561 U.S. at 610–11). Allowing the three True Name patents to survive Section 101 would allow Plaintiff to monopolize the entire field of data-storage. *Cf. id.* at 226–27

1 (“The concept of patentable subject matter under § 101 is not like a nose of wax which may be
 2 turned and twisted in any direction.” (quotation marks and citation omitted)). Accordingly,
 3 because the asserted claims’ steps do nothing more than apply a well-known hashing concept to
 4 data-storage, the ’310, ’280, and ’662 patents are directed to patent-ineligible subject matter and
 5 fail under Section 101.

6 **IV. CONCLUSION**

7 For the foregoing reasons, the Court **GRANTS** Defendants’ motion for judgment on the
 8 pleadings and holds the ’310, ’280, and ’662 patents invalid for failure to satisfy 35 U.S.C. § 101.
 9 Since this is a legal issue and amendment would be futile, leave to amend would be denied. In any
 10 event, such leave was not requested. The Clerk shall close the file and a judgment in favor of
 11 Defendants shall follow.

12 **IT IS SO ORDERED.**

13 Dated: January 29, 2020

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 15 EDWARD J. DAVILA
 16 United States District Judge
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