

Nos. 20-1543, 20-1553, 20-1554

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

PERSONALWEB TECHNOLOGIES LLC,

Plaintiff-Appellant,

v.

GOOGLE LLC, YOUTUBE, LLC,

Defendants-Appellees.

Appeal from the United States District Court for the Northern District of California
in Case No. 5:13-cv-01317-EJD, Chief Judge Edward J. Davila.

PERSONALWEB TECHNOLOGIES LLC,

Plaintiff-Appellant,

v.

FACEBOOK INC.

Defendant-Appellee.

Appeal from the United States District Court for the Northern District of California
in Case No. 5:13-cv-01356-EJD, Chief Judge Edward J. Davila.

(Continued on next page)

PERSONALWEB TECHNOLOGIES LLC,

Plaintiff-Appellant,

v.

EMC CORPORATION, VMARE, INC.

Defendants-Appellees.

Appeal from the United States District Court for the Northern District of California
in Case No. 5:13-cv-01358-EJD, Chief Judge Edward J. Davila.

**APPELLANT PERSONALWEB TECHNOLOGIES LLC'S
PETITION FOR REHEARING EN BANC**

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September 27, 2021

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

CERTIFICATE OF INTEREST

Case Number 20-1543, 20-1553, 20-1554

Short Case Caption PersonalWeb Technologies LLC v. Google LLC

Filing Party/Entity PersonalWeb Technologies, LLC

Instructions: Complete each section of the form. In answering items 2 and 3, be specific as to which represented entities the answers apply; lack of specificity may result in non-compliance. **Please enter only one item per box; attach additional pages as needed and check the relevant box.** Counsel must immediately file an amended Certificate of Interest if information changes. Fed. Cir. R. 47.4(b).

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Date: 09/03/2021

Signature: /s/ Lawrence Hadley

Name: Lawrence Hadley

<p>1. Represented Entities. Fed. Cir. R. 47.4(a)(1).</p>	<p>2. Real Party in Interest. Fed. Cir. R. 47.4(a)(2).</p>	<p>3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3).</p>
<p>Provide the full names of all entities represented by undersigned counsel in this case.</p>	<p>Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.</p> <p><input checked="" type="checkbox"/> None/Not Applicable</p>	<p>Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.</p> <p><input checked="" type="checkbox"/> None/Not Applicable</p>
<p>PersonalWeb Technologies, LLC</p>		

Additional pages attached

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None/Not Applicable Additional pages attached

Exhibit A

The following cases pending in this or any other court or agency may directly affect, or be directly affected by, this court's decision in the pending appeal:

Supreme Court Cases:

1. *PersonalWeb Technologies, LLC v. Patreon, Inc., et al.*, Sup. Ct. Case No. 20-1394 (petition for *certiorari* filed April 2, 2021; petition pending).

Federal Circuit Cases

1. *In re PersonalWeb Techs. LLC*, CAFC Case No. 20-1566 (judgment entered August 12, 2021; time for filing for panel or *en banc* hearing not yet run).

District Court Cases (all pending in the Northern District of California)

1. *Amazon.com, Inc. and Amazon Web Services, Inc. v. PersonalWeb Techs., LLC et al.*, No. 5:18-cv-00767-BLF;
2. *PersonalWeb Techs., LLC v. Twitch Interactive, Inc.*, No. 3:18-cv-05619-BLF;
3. *In re PersonalWeb Techs., LLC* No. 5:18-md-02834;
4. *PersonalWeb Techs., LLC et al. v. BuzzFeed Inc.*, No. 5:18-cv-06046;
5. *PersonalWeb Techs., LLC et al. v. Dictionary.com, LLC*, No. 5:18-cv-05606;

6. PersonalWeb Techs., LLC et al. v. Oath Inc., No. 5:18-cv-06044;
7. PersonalWeb Techs., LLC et al. v. Patreon, Inc., No. 5:18-cv-05599;
8. PersonalWeb Techs., LLC et al. v. Popsugar, Inc., No. 5:18-cv-06612;
9. PersonalWeb Techs., LLC et al. v. Vice Media, LLC, No. 5:18-cv-05970;
10. PersonalWeb Techs., LLC et al. v. Vox Media, Inc., No. 5:18-cv-05969;
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62. PersonalWeb Techs. LLC v. Shopify (USA) Inc., No. 5:18-cv-04626-BLF;
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66. PersonalWeb Techs. LLC v. Square, Inc., 5:18-cv-00183-BLF;
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71. PersonalWeb Techs. LLC v. TastyTrade, Inc., No. 5:18-cv-05204-BLF;
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RULE 35(B) STATEMENT

Based on my professional judgment, I believe the panel decision is contrary to the following decision(s) of the Supreme Court of the United States or the precedent(s) of this court: *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208 (2014); *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66 (2012); *O’Reilly v. Morse*, 56 U.S. (15 How.) 62 (1854); *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987 (Fed. Cir. 2017); *Personal Web Techs., LLC v. Apple, Inc.*, 917 F.3d 1376 (Fed. Cir. 2019); *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143 (Fed. Cir. 2019); *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303 (Fed. Cir. 2020).

Based on my professional judgment, I believe this appeal requires an answer to the following precedent-setting question of exceptional importance: Whether the judicially-created “abstract idea” exclusion from patent eligibility under § 101 of the Patent Act should be analyzed using a technological improvement approach or using an element-by-element approach—an approach that considers whether individual patent limitations, standing alone, fall within one of the patent-ineligible categories?

Dated: September 27, 2021

/s/ Lawrence Hadley
Lawrence Hadley, Esq.

INTRODUCTION

A standard for resolving § 101 cases, particularly for the judicially-created “abstract idea” exception to patent eligibility, is sorely needed to give effect to the Constitution’s mandate for a patent system that “promote[s] the progress of sciences and useful arts.” U.S. Const., Art. 1, Sec. 8. Without at least some level of predictability in what claims are eligible for protection under the patent laws, American innovation is threatened. This case presents an ideal vehicle for doing so.

PersonalWeb’s “True Name” patented inventions—U.S. Patents 7,802,310, 6,415,280, and 7,949,662—generate a substantially unique identifier from the contents of data files in a network, and use the identifier to uniquely identify the file wherever it appears. The patents also describe other uses for such identifiers, including locating, granting access, and distributing data anywhere in a network without knowing either the file’s user-given name or its location.

In two precedential decisions of this Court, separate panels (comprising Judges Moore, Taranto, Chen, and Stoll) agreed that challenged claims in the ’310 patent had not been proven obvious over the use of unique identifiers in prior art computing systems. Both opinions described the True Name patents as providing a technological improvement over those systems. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017) (“*PersonalWeb I*”); *Personal Web Techs., LLC v. Apple, Inc.*, 917 F.3d 1376, 1382-83 (Fed. Cir. 2019) (“*PersonalWeb II*”).

This Court’s most recent § 101 decisions emphasize that the touchstone of patent-eligibility is a technological improvement—just as the two prior panels described. Yet a different panel of this Court (Judges Lourie, Prost, and Reyna) has now held that the same patents are ineligibly abstract. The panel here never mentioned the technological improvement test, or even cited this Court’s recent cases applying that test. *Personal Web Techs., LLC v. Google, LLC*, 2020-1543 (Fed. Cir. Aug. 12, 2021) (“Slip Op.”). Instead, the panel applied an “element-by-element” approach for “abstractness.”

The panel’s element-by-element approach allowed it to find patent ineligibility despite the clear technological improvements in the True Name patents. At *Alice* step 1, the panel looked at each limitation in isolation and found each step “abstract.” Slip Op. at 11-13. It then simply declared that the claims “clearly focused on the combination” of the individual limitations’ “abstract idea processes”—without considering whether the “whole” claimed a technological improvement. *Id.* at 13. In step two, the panel found nothing “inventive about any claim details, individually or in combination” beyond “the abstract idea itself,” without addressing any of the “inventive concepts” that the prior panels recognized.

Before the panel’s decision, determining whether claims satisfied § 101 lacked predictability, especially in the computing arts. Indeed, the absence of a reliable eligibility standard has been the subject of scholarly articles and proposed

congressional action. See Jeffrey A. Lefstin *et al.*, *Final Report of the Berkeley Center for Law & Technology Section 101 Workshop: Addressing Patent Eligibility Challenges*, 33 Berkeley Tech. L.J. 551, 581-91 (2018); The State of Patent Eligibility in America: Part I: Hearing Before the Subcomm. on Intellectual Property of the S. Comm. on the Judiciary, 116 Cong. (June 4, 2019) (statement of Adam Mossof), at 4-7.¹

With the panel’s decision here, the patent eligibility standard in the computing arts is even less certain. Two different approaches to the “abstract idea” exclusion now exist—a technological improvement approach and an element-by-element approach. Few claims—and certainly almost no claim in the computing arts—can satisfy the latter approach. Indeed, the claim limitations that the panel found “abstract” here are indistinguishable from the limitations in the claims held patent-eligible in *Diamond v. Diehr*, 450 U.S. 175, 192-93 (1981). It is time for this Court to reinstall some predictability into patent eligibility in the computing arts, and set a more certain standard for resolving Section 101 challenges.

¹ <https://www.judiciary.senate.gov/imo/media/doc/Mossoff%20Testimony.pdf>.

ARGUMENT

I. THE PANEL’S ELEMENT-BY-ELEMENT APPROACH TO PATENT ELIGIBILITY CONFLICTS WITH PRECEDENT

Precedents hold that claims satisfy § 101 when they recite, as a whole, a technological improvement, as opposed to a fundamental “building block” of human endeavor with a direction to “apply it.” The panel’s element-by-element approach here conflicts those precedents.

A. The Panel Improperly Applied an “Element-By-Element” Approach in Finding the True Name Claims Patent-Ineligible

The True Name claims that were ultimately held patent-ineligible all contain specific, detailed limitations that recite nonobvious subject matter, as illustrated in claim 24 of the ’310 patent:

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

- (a) using a processor, receiving at a first computer from a second computer, a request regarding a particular data item, said request including at least a content-dependent name for the particular data item, the content-dependent name being based, at least in part, on at least a function of the data in the particular data item, wherein the data used by the function to determine the content-dependent name comprises at least some of the contents of the particular data item, wherein the function that was used comprises a message digest function or a hash function, and wherein two identical data items will have the same content-dependent name; and
- (b) in response to said request:
 - (i) causing the content-dependent name of the particular data item to be compared to a plurality of values;
 - (ii) hardware in combination with software determining whether or not access to the particular data item is unauthorized based on whether the content-dependent name of the particular data item corresponds to at least one of said plurality of values, and
 - (iii) based on said determining in step (ii), not allowing the particular data item to be provided to or accessed by the second computer if it is determined that access to the particular data item is not authorized.

In fact, the panel here recognized that, while content-based identifiers were known in the prior art, two prior panels found the claims at issue nonobvious over prior art that used such identifiers. Slip Op. at 6 (*citing PersonalWeb I*, 848 F.3d at 994).

Under the panel’s element-by-element approach to Section 101, that advancement over the prior art was not enough to save the challenged claims. The panel started by rejecting PersonalWeb’s contention that the claims are “directed to ‘a substantially unique, algorithm-derived, content-based identifier for all data items in a networked computer, which allows a computer within a network containing diverse computing and storage systems to locate and distribute data without knowing either the file system of any device within the network or the conventional name of any data item.’” Slip Op. at 9. Instead, the panel found the claims “directed to the use of an algorithm-generated content based identifier to perform the claimed data-management functions....” *Id.* at 10. In reaching this conclusion, the panel concluded that its formulation “tracks the claim language,” without considering whether the claims were “directed to” a technological improvement. *Id.* at 9.

With the invention distilled into a single sentence summarizing the claims’ limitations, the panel proceeded to determine whether each limitation, standing alone, could be characterized as “abstract.” First, the panel distilled the entire limitation (a) into “use of a content-based identifier.” *Id.* at 11. The panel then

adopted a rule that both the creation and use of content-based identifiers are “abstract,” regardless of purpose. *Id.* at 11-12.

Second, the panel looked to limitation (b)(i)—which it described as “comparing the content-based identifier against other values.” *Id.* at 12. This is the limitation—the actual language is “causing the content-dependent name of the particular data item to be compared to *a plurality of values*”—that the prior *PersonalWeb* panels found missing in the “computer backup” prior art. It is also what allows, unlike the prior art, locating and distributing data without knowing its user-given name, or where it resides in a system-wide network. But without considering that improvement, the panel simply labeled “comparing” an abstract “mental process,” *id.*, even though no human could mentally compute the content-based identifier and compare it against all other network identifiers.

Third, the panel characterized the remaining limitations in all three patents as “data-management functions,” labeling each “abstract.” *Id.* at 12-13. Again, the panel gave no consideration to the actual claim language used, *e.g.*, the access control limitations that follow the comparison step. No matter: The panel created another rule that “[c]ontrolling access to data items,” no matter how done, “can be performed in the human mind, or by a human using pen and paper.” *Id.* (internal quotations omitted).

The panel recognized that the step-one inquiry requires examination of the claims as a whole. *Id.* at 13. But that made no difference. Having found each individual limitation abstract, the panel concluded that “[s]tringing together” the abstract individual limitations amounted to no more than the abstract ideas themselves—again, without considering the technological improvements that the limitations *collectively* achieved. *Id.*

Finally, the panel turned to step two—the search for an inventive concept—but the outcome was already determined in step one. Having labeled each limitation “abstract,” the panel concluded that “there is nothing inventive about any claim details, individually or in combination, that are not themselves abstract.” *Id.* at 15 (citations omitted). But the panel did not address the “inventive concept” inherent in the prior panels’ non-obviousness determinations. Instead, the panel found that even if the combination improved “efficiency,” that was not enough to “confer patent eligibility on an otherwise abstract idea.” *Id.* (internal quotations omitted).

B. The Panel’s “Element-by-Element” Approach Conflicts with *Alice*

The Patent Act specifies the subject matter eligible for a patent—“any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The “expansive terms” of Section 101 were intended to give “the patent laws ... wide scope.” *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980).

The Supreme Court has judicially established three exceptions to the statutory language: “[l]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). It also has established a “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Id.* at 217. First is “whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If not, the claims are eligible, and the inquiry ends. But if the answer to the first step is “yes,” the second step “consider[s] the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* at 2355 (quoting *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 72 (2012)). This step asks whether the claims add an “inventive concept” that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Id.*

For both steps, the Supreme Court’s *Alice* and *Mayo* decisions provide guidance for the § 101 analysis. In step one, the search for “patent-ineligible concepts” guards against monopolizing fundamental practices. “[T]he concern that drives” the judicial § 101 exclusions is “pre-emption.” *Alice Corp.*, 573 U.S. at 216. Patent holders should not be permitted to “[m]onopoliz[e]” the “basic tools of scientific and technological work” and the fundamental “building blocks of human

ingenuity.” *Id.* (internal quotations and citations omitted). Accordingly, the Court instructed that claims are “directed to” a patent-ineligible concept when they recite one of those “building blocks,” such as “fundamental economic practice[s],” in a way that potentially places the “building block” at risk of preemption. *See id.* at 217, 219-20. If a claim is not directed to such a fundamental building block, it does not fall within a judicial exclusion. *Id.* at 216-17.

Alice step one provides an initial filter ensuring that only claims “directed to” fundamental “building blocks” are subjected to the more probing step two analysis. *Alice*, 573 U.S. at 217. But the panel here never addressed whether the claims are directed to a fundamental “building block.” *Id.* at 216. Instead, the panel distilled the claim elements into “the use of an algorithm-generated content based identifier to perform the claimed data-management functions,” and declared this distillation “abstract” under step one—effectively placing all uses of an “algorithm-generated content based identifier” under the umbrella of a fundamental building block.

In step two, the concern is with “apply it” claims. In the computing arts, “apply it” claims do nothing more than recite a fundamental building block and state “apply it,” using an “unspecified” and “wholly generic computer implementation.” *Alice*, 573 U.S. at 223-224, 226. To test for “apply it” claims, step two looks to whether there is a separate “inventive concept” sufficient to “transform the nature”

of a claim directed to a “fundamental building block” (identified in step one) “into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79).

In applying step two, the panel never went beyond its step one consideration of the individual claim limitations, finding that the “claim details” recited “nothing inventive . . . individually or in combination, that are not themselves abstract ideas.” Slip Op. at 15 (internal citations omitted). Had the panel looked for an “inventive concept,” the starting point would have been the prior panels’ non-obviousness determinations. But the panel never dug beyond its earlier conclusion that adding individual abstract ideas into a whole claim still yields an abstract idea.

Finally, to guide the application of these principles, the Supreme Court directed lower courts to compare claims to its “controlling precedents.” *Mayo*, 132 S. Ct. at 1298; *Alice*, 573 U.S. at 221-23, 226. For the “abstract idea” exception, those precedents include *Benson*, *Flook*, *Diehr*,² and *Alice*. *Benson*, *Flook*, and *Alice* all involve “apply it” claims. *Benson* found ineligible a claim for an algorithm (long considered an abstract idea) applied on “a general-purpose digital computer.” *Benson*, 409 U.S. at 64. Likewise, *Flook* considered claims using a mathematical formula to adjust alarm limits in a catalytic conversion process. 437 U.S. at 585–

² *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Parker v. Flook*, 437 U.S. 584 (1978); *Diehr*, 450 U.S. at 175.

586. The claims were found ineligible because “the computer implementation was purely conventional.” *Alice*, 573 U.S. at 222.

The claims in *Diehr* too involved a mathematical formula, but the Supreme Court reached a different result. The patentee in *Diehr* claimed an improved rubber curing process, which included in several steps reciting the use of a mathematical formula and a programmed digital computer. *Diehr*, 450 U.S. at 177. But the Court found the claims patent eligible because the claims as a whole recited an improved technological process for molding rubber products. *Id.* at 191.

Under these cases, patent eligibility turns on this: While “patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment,” claims that “improve[] an existing technological process,” regardless of how they are implemented, are patent eligible. *Alice*, 573 U.S. at 223.

The panel’s element-by-element approach not only failed to make this distinction, it never compared the claims at issue to any of the controlling precedents. If it had, the similarity between the True Name claims and *Diehr*’s claims would have demonstrated eligibility. The *Diehr* claims recited: (i) an algorithm limitation, (ii) an inputting limitation to a digital computer, (iii) a “comparing” limitation for comparing a calculated output to a predicted value using the Arrhenius equation, and (iv) an “opening” limitation when the “comparison indicates equivalence.”

Application of Diehr, 602 F.2d 982, 983 (C.C.P.A. 1979), *aff'd sub nom. Diehr*, 450 U.S. at 175. These limitations closely align—in a manner that cannot be distinguished based on abstractness—with the True Name’s “calculate identifier,” “comparison,” and “access,” “distribution,” and “delete” limitations that take place upon an identifier match. The *Diehr* claims would have failed patent eligibility under the panel’s element-by-element approach—each *Diehr* limitation could be cast individually as “abstract.” But the *Diehr* claims went beyond limiting an abstract idea to a particular technological environment. Rather, just like the claims here, they recited, as a whole, an “improved . . . technological process.” *Alice*, 573 U.S. at 223.

C. Section 101 Precedents Focus on Technological Innovation

The Supreme Court’s § 101 precedents all hold that claims “directed to” technological improvements do not recite patent-ineligible building blocks. *Alice* explained that computer-based technology can be patentable when it “improve[s] the functioning of the computer itself” or when it “effect[s] an improvement in [a] . . . technology or technical field.” *Alice*, 573 U.S. at 225. Indeed, the technological improvement approach to patent eligibility dates back to *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112–120 (1854), where some claims were found patent-eligible, not by what the individual limitations recited (all were known in the prior art), but because they collectively claimed a technological innovation as opposed to a building block.

Until the panel decision here, this Court’s most recent precedential § 101 decisions all focused on whether the claims, as a whole, recited a technological improvement. For example, this Court recently explained that the “relevant inquiry is whether the claims ... focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea.” *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1151 (Fed. Cir. 2019) (“*KPN*”). If a claim recites a mere desired “result or effect,” it may be “abstract,” but if it recites the “specific means or method” that achieves the result or effect, it is not abstract. *Id.* at 1150, 1152; *see also Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1306-07 (Fed. Cir. 2020) (“In cases involving software innovations, [the § 101] inquiry often turns on whether the claims focus on specific asserted improvements in computer capabilities or instead on a process or system that qualifies an abstract idea for which computers are invoked merely as a tool.”) (internal citation omitted).

KPN highlights the outcome-determinative difference between a technological improvement approach and an element-by-element approach. It made no difference in *KPN* whether the individual limitations considered in isolation could be considered “abstract.” What mattered, consistent with controlling Supreme Court precedent, was whether the claims as a whole “improved an existing technological process,” as opposed to limiting the use of an otherwise abstract idea “to a particular

technological environment.” *Alice*, 573 U.S. at 223. In contrast, the panel’s element-by-element approach can, and did here, lead directly to the opposite conclusion.

II. THE TRUE NAME PATENTS CLAIM A TECHNOLOGICAL INNOVATION

The panel did not examine whether the True Name patents claim technological improvements in network computing. Rather, after characterizing the invention broadly as the “use of content-based identifiers to perform data management functions,” the panel proceeded with its element-by-element approach.

But two different panels of this Court, in overturning invalidity decisions based on obviousness, described the invention’s technological improvement:

The ’310 patent explains that in conventional data processing systems, data items such as files are typically identified by their user-created alphanumeric name and/or pathname or location. Certain problems arise, however, using traditional naming conventions. For example, if one device transfers a data item to a second device using just the name associated with the data item, it is possible that the data item already exists on the second device, and a duplicate of the data item will be created. The ’310 patent contemplates a method and apparatus for resolving this and other concerns by creating a substantially unique identifier for each data item in the data processing system that is independent of the data item’s user-defined name, location, etc., but rather is dependent on only the content of the data item itself. The identifier for a particular data item is created by applying a cryptographic hash function to the data item. 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. The system uses the content-based identifier alone to

determine whether a particular data item is present on the system. When the data item's contents are changed, the content-based identifier of the data item also changes.

The '310 patent explains that content-based identifiers can be used for various purposes in data processing systems, including, for example, to identify data items in a "license table." The patent describes a license table as a two-field database containing a list of content-based identifiers and, for each content-based identifier, a list of users authorized to access the data item associated with the content-based identifier.

PersonalWeb II, 917 F.3d at 1377–78 (citations omitted). And both prior panels found that claim limitations necessary to implement this technological improvement were missing in the prior art. *PersonalWeb I*, 848 F.3d at 993.

While non-obvious claims do not necessarily recite patent-eligible subject matter, the Supreme Court has made equally clear that non-obvious improvements to prior "technological processes" are patent eligible. The prior panels plainly found that the True Name invention claims non-obvious improvements to prior technology. The claims recite the "specific means and methods" for identifying any data item in a network, and for performing functions on that data, all without knowing the data's user-given name and location, or even how the data is stored. These improvements are neither a "fundamental building block" nor the application of a building block in a particular technological environment. They are an invention.

The panel's element-by-element approach never reached the technological improvement issue. Instead, the panel found that the individual limitations recite

“mental processes that can be performed in the human mind or using pencil and paper.” Slip Op. at 10. But the panel never explained how a human could mentally, or with pen and paper, divide all content in a network into data items, calculate a content-based identifier for each data item (a process designed solely for computers), compare the result for one data item to all other identifiers, and then use the result to “perform data management functions” without knowing the user-given name or location of the data item. And it cannot be humanly done.

Similarly, the panel compared the invention to library “call systems.” *Id.* at 10-11. But they are nothing alike. The True Name invention would be analogous to taking every book in all libraries, removing each page, randomly placing the pages in different libraries, then asking a librarian to determine whether a verbatim copy of a page exists somewhere using only a “call number” without a title or location. Again, this could never be done with any conventional “call system.”

Finally, the panel rejected any improvement as mere “efficiency benefits.” *Id.* at 14. But the invention, as the prior panels recognized, provides more than improved “efficiency.” Even if improved efficiency can never suffice as a technological improvement (a questionable premise), the invention goes further—allowing files to be located, accessed, or distributed without knowing their user-given name or location in a network. The panel never addressed this improvement.

III. THIS CASE OFFERS AN IDEAL VEHICLE FOR THIS COURT TO ADDRESS THE § 101 STANDARD *EN BANC*

Three years after *Alice*, Judge Linn observed that federal courts had been unable to apply the abstract idea exception in any consistent matter: “the contours of the abstract idea exception are not easily defined” and “[f]or that reason, the abstract idea exception is almost impossible to apply consistently and coherently.” *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1377 (Fed. Cir. 2017) (Linn, J., dissenting in part and concurring in part). Since *Alice*, this problem remains unsolved. And now, with the two different approaches to the eligibility question, the public’s ability to evaluate what claims may be patent eligible will only grow more uncertain. It has been nearly ten years since the Federal Circuit has considered patent eligibility *en banc*, even though it is subject to more litigation in the lower courts than almost any other patent issue. Therefore, it is time for the Court, *en banc*, to at least consider the correct approach for determining patent eligibility.

This case presents an ideal vehicle for doing so. First, the panel decided this case on a Rule 12 motion; thus, it presents a pure legal issue. Second, the panel decided this case in a precedential decision. Third, the panel’s analysis was based on a single exemplary claim, which limits the number of issues necessary for this Court to resolve. Finally, seven Judges of this Court in three published decisions have already considered the claims at issue, but reached different results.

CONCLUSION

For the forgoing reasons, Petitioner respectfully asks that its petition be granted, and that the Court consider the panel decision below *en banc*.

Dated: September 27, 2021

Respectfully submitted,

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ADDENDUM

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

PERSONALWEB TECHNOLOGIES LLC,
Plaintiff-Appellant

v.

GOOGLE LLC, YOUTUBE, LLC,
Defendants-Appellees

2020-1543

Appeal from the United States District Court for the
Northern District of California in No. 5:13-cv-01317-EJD,
Judge Edward J. Davila.

PERSONALWEB TECHNOLOGIES LLC,
Plaintiff-Appellant

v.

FACEBOOK, INC.,
Defendant-Appellee

2020-1553

Appeal from the United States District Court for the Northern District of California in No. 5:13-cv-01356-EJD, Judge Edward J. Davila.

PERSONALWEB TECHNOLOGIES LLC,
Plaintiff-Appellant

LEVEL 3 COMMUNICATIONS LLC,
Plaintiff

v.

EMC CORPORATION, VMWARE, INC.,
Defendants-Appellees

2020-1554

Appeal from the United States District Court for the Northern District of California in No. 5:13-cv-01358-EJD, Judge Edward J. Davila.

Decided: August 12, 2021

LAWRENCE MILTON HADLEY, Glaser Weil Fink Howard Avchen & Shapiro LLP, Los Angeles, CA, argued for plaintiff-appellant. Also represented by JOEL LANCE THOLLANDER, McKool Smith, PC, Austin, TX.

CYNTHIA D. VREELAND, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for all defendants-appellees. Defendants-appellees EMC Corporation, VMware, Inc. also represented by JONATHAN COX, PETER M.

PERSONALWEB TECHNOLOGIES LLC v. GOOGLE LLC

3

DICHIARA, MARK CHRISTOPHER FLEMING; ELIZABETH BEWLEY, Washington, DC.

MATTHIAS A. KAMBER, Kecker, Van Nest & Peters LLP, San Francisco, CA, for defendants-appellees Google LLC, YouTube, LLC. Also represented by DAN L. BAGATELL, Perkins Coie LLP, Hanover, NH.

HEIDI LYN KEEFE, Cooley LLP, Palo Alto, CA, for defendant-appellee Facebook, Inc. Also represented by REUBEN HO-YEN CHEN, LAM K. NGUYEN, MARK R. WEINSTEIN.

Before LOURIE, PROST*, and REYNA, *Circuit Judges*.

PROST, *Circuit Judge*.

PersonalWeb Technologies appeals a decision by the United States District Court for the Northern District of California granting judgment on the pleadings for appellees Google LLC, YouTube, LLC, Facebook Inc., EMC Corporation, and VMware, Inc. That decision held various claims of U.S. Patent Nos. 7,802,310 (“the ’310 patent”), 6,415,280 (“the ’280 patent”), and 7,949,662 (“the ’662 patent”) ineligible for patenting, and therefore invalid, under 35 U.S.C. § 101.¹ *PersonalWeb Techs. LLC v. Google LLC*, No. 5:13-CV-01317, 2020 WL 520618, at *14 (N.D. Cal. Jan. 31, 2020). We affirm.

* Circuit Judge Sharon Prost vacated the position of Chief Judge on May 21, 2021.

¹ The claims are: ’310 patent claims 24, 32, 81, 82, and 86; ’280 patent claims 15, 16, 31, and 32; and ’662 patent claim 33.

BACKGROUND

I

PersonalWeb’s asserted patents, which share a specification and drawings, claim priority from an application filed in 1995. We assume general familiarity with the patented subject matter, as we have discussed the ’310 patent in prior opinions.² See *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987 (Fed. Cir. 2017); *PersonalWeb Techs., LLC v. Apple, Inc.*, 917 F.3d 1376 (Fed. Cir. 2019). In brief, the patents relate to data-processing systems that assign each data item a substantially unique name that depends on the item’s content—a content-based identifier. ’310 patent col. 1 l. 44–col. 2 l. 5, col. 3 ll. 50–58, col. 6 ll. 20–24. These identifiers are generated by a mathematical algorithm, such as a cryptographic hash or “message digest” function. *Id.* at col. 12 l. 21–col. 13 l. 9. The identifier changes when the data item’s content changes. *Id.* at col. 35 ll. 55–63. The patents claim using such identifiers to perform various data-management functions. Claim 24 of the ’310 patent, for example, sets forth a method for using content-based identifiers to control access to data. The method generally proceeds in three steps: (1) receiving a request containing a content-based identifier for a data item, (2) comparing the content-based identifier to a plurality of values, and (3) granting or disallowing access to the data item based on the comparison:

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

(a) using a processor, receiving at a first computer from a second computer, a request regarding a particular data item, said request including at least a

² For simplicity, all citations to the shared specification are to the ’310 patent.

content-dependent name for the particular data item, the content-dependent name being based, at least in part, on at least a function of the data in the particular data item, wherein the data used by the function to determine the content-dependent name comprises at least some of the contents of the particular data item, wherein the function that was used comprises a message digest function or a hash function, and wherein two identical data items will have the same content-dependent name; and

(b) in response to said request:

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

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

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

'310 patent claim 24.

The relevant '280 and '662 patent claims reflect a similar pattern but are geared toward different data-management functions. Specifically, the '280 patent claims use content-based identifiers to retrieve data items, and the '662 patent claims use content-based identifiers to mark duplicate data items for deletion. *E.g.*, '280 patent claim 31; '662 patent claim 33. The disclosed systems are "intended to work with an existing operating system." '310 patent col. 6 ll. 25–32.

II

PersonalWeb sued the appellees for patent infringement in the Eastern District of Texas. After claim construction, the cases were transferred to the Northern District of California. That court stayed the cases pending resolution of several inter partes reviews (“IPRs”) at the Patent Trial and Appeal Board (“Board”), which challenged various claims. In six IPRs filed by EMC and VMware, the Board held all challenged claims unpatentable (including ’280 patent claims 26 and 38, as well as ’662 patent claim 30). In doing so, the Board found that using hash-based identifiers for data management was disclosed in the prior art. J.A. 3426 (addressing ’280 patent); J.A. 3462–63 (addressing ’662 patent). We affirmed all six Board decisions. *Pers. Web Techs., LLC v. EMC Corp.*, 612 F. App’x 611 (Fed. Cir. 2015). The Board also held various ’310 patent claims unpatentable in a separate IPR filed by Apple Inc. On appeal, we affirmed the Board’s claim construction but remanded for it to reassess obviousness under proper procedural constraints. *PersonalWeb Techs.*, 848 F.3d at 994. Along the way, we noted that a prior-art reference “discloses a system for using content-based identifiers in performing file-management functions, such as backing up files.” *Id.* at 989. On review of the Board’s remand decision, we reversed the Board’s finding that a particular limitation was inherently disclosed in the prior art, but we did not disturb our earlier observation that content-based identifiers were known. *PersonalWeb*, 917 F.3d at 1380–83 (reiterating that “none of the parties disagreed” that the prior-art identifier “corresponded to the claimed content-based identifier”).

After the stay was lifted, the appellees moved for judgment on the pleadings that the remaining asserted claims were ineligible under 35 U.S.C. § 101. The district court granted the motion. *PersonalWeb*, 2020 WL 520618,

at *14.³ PersonalWeb appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

The Patent Act defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has held that “this provision contains an important implicit exception: [l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). This exception reflects the “concern that patent law not inhibit further discovery by improperly tying up the future use of these building blocks of human ingenuity.” *Id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 85 (2012)). To assess patent eligibility, we apply the two-step framework set forth in *Mayo* and further detailed in *Alice*. At step one, we “determine whether the claims at issue are directed to a patent-ineligible concept” such as an abstract idea. *Alice*, 573 U.S. at 218. At step two, “we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application.” *Id.* at 217 (cleaned up).

Patent eligibility is a question of law that may involve underlying questions of fact. *Simio, LLC v. FlexSim Software Prods., Inc.*, 983 F.3d 1353, 1358–59 (Fed. Cir. 2020). But “not every § 101 determination contains genuine

³ The district court also declined to convert the motion into one for summary judgment. *PersonalWeb*, 2020 WL 520618, at *7. PersonalWeb does not challenge that aspect of the district court’s decision.

disputes over the underlying facts material to the § 101 inquiry.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Indeed, that inquiry “may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility under the substantive standards of law.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (collecting cases). We apply the procedural law of the regional circuit, here the Ninth Circuit, which reviews Rule 12(c) motions de novo. *Allergan, Inc. v. Athena Cosms., Inc.*, 640 F.3d 1377, 1380 (Fed. Cir. 2011) (citing *Or. Nat. Desert Ass’n v. U.S. Forest Serv.*, 550 F.3d 778, 782 (9th Cir. 2008)). The governing standard is “functionally identical” to that for a motion to dismiss. *Dworkin v. Hustler Mag. Inc.*, 867 F.2d 1188, 1192 (9th Cir. 1989). The standard is “whether the complaint at issue contains ‘sufficient factual matter, accepted as true, to state a claim of relief that is plausible on its face.’” *Harris v. Cnty. of Orange*, 682 F.3d 1126, 1131 (9th Cir. 2012) (quoting *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009)). We review the district court’s ultimate patent-eligibility conclusion de novo. *Simio*, 983 F.3d at 1359.

I

We start at step one. Because “all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” *Alice*, 573 U.S. at 217 (cleaned up), we must decide “whether that patent-ineligible concept is what the claim is ‘directed to,’” *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 765 (Fed. Cir. 2019) (quoting *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017)). To do so, we evaluate “the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Intell. Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1325 (Fed. Cir. 2017) (quoting *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d

1253, 1257 (Fed. Cir. 2016)). Here, the answer is yes. The claims are directed to an abstract idea.

PersonalWeb contends that the claims are directed to “a substantially unique, algorithm-derived, content-based identifier for all data items in a networked computer, which allows a computer within a network containing diverse computing and storage systems to locate and distribute data without knowing either the file system of any device within the network or the conventional name of any data item.” Appellant’s Br. 23. The district court, on the other hand, concluded that the patents are directed to a 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, [that is,] another content-based identifier or a request for data; and (3) providing access to, denying access to, or deleting data.” *PersonalWeb*, 2020 WL 520618, at *10. We adopt the district court’s view, which closely tracks the claim language. See *ChargePoint*, 920 F.3d at 769 (“[T]he § 101 inquiry must focus on the language of the Asserted Claims themselves” (quoting *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016)); *Alice*, 573 U.S. at 219 (“*On their face*, the claims before us are drawn to the concept of intermediated settlement” (emphasis added))). The district court’s description, for example, mirrors the progression of ’310 patent claim 24 (reproduced above), on which PersonalWeb relies, Appellant’s Br. 24.

Although PersonalWeb criticizes the district court’s “summary of the asserted claims into a three-step process,” Appellant’s Br. 31 (internal quotation marks omitted), this formulation is not meaningfully distinguishable from what PersonalWeb said in opposing the § 101 motion:

The asserted claims all recite (1) dividing the data into sequences of bits, (2) calculating content-based identifiers using the data in the data items, . . .

(3) comparing the identifiers against a plurality of other identifiers in the network, and (4) using the results to identify, access, authorize access, or manage the number of copies of data items within the network.

...

Each asserted claim recites using content-based values as a name or identifier for a data item: in the '310 patent, to control access to data items; in the '280 patent, to retrieve and deliver copies of data items; and in the '662 patent, to mark copies of data items for deletion.

J.A. 6572, 6581. Because we must “focus here on whether the *claims* of the asserted patents fall within the excluded category of abstract ideas,” we agree with the district court. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014) (emphasis added). We therefore conclude that the claims are directed to the use of an algorithm-generated content-based identifier to perform the claimed data-management functions, which across the three patents include controlling access to data items (the '310 patent), retrieving and delivering copies of data items (the '280 patent), and marking copies of data items for deletion (the '662 patent).

These functions are mental processes that “can be performed in the human mind” or “using a pencil and paper.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371–72 (Fed. Cir. 2011) (cleaned up) (quoting *Parker v. Flook*, 437 U.S. 584, 586 (1978))—a telltale sign of abstraction. Appellees’ “library” example is instructive: “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.” *PersonalWeb*, 2020 WL 520618, at *12. Such content-based identifiers may be used to control access to books (e.g., authorize borrowing depending on book content), retrieve

books (e.g., locate books on shelves based on their content), or purge duplicate books (e.g., discard duplicates identified by their content). The claims do this in a computer environment, but that doesn't transfigure an idea out of the realm of abstraction. See *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016) ("An abstract idea on 'an Internet computer network' . . . is still an abstract idea."). The claims' focus, therefore, is abstract. And our cases confirm this. As explained below, each component of the claims' three-step progression reflects a concept we have already described as abstract.

First is the use of a content-based identifier. We said that was abstract in *Erie*. There, we addressed claims to "search [a] database using an index," in which "every record in the database is associated with one or more descriptive terms" organized using "category tags" for "grouping of similar terms" and "domain tags" for "grouping of similar categories." *Erie*, 850 F.3d at 1326. We noted the same pen-and-paper analogue: "a hardcopy-based classification system (such as library-indexing system)" in which "classifiers organize and cross-reference information and resources (such as books, magazines, or the like) by certain identifiable tags, e.g., title, author, subject." *Id.* at 1327. We similarly described content-based identifiers as abstract in *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910–11 (Fed. Cir. 2017) (abstract idea of using a "unique identifier . . . to communicate information about the mail object, i.e., the sender, recipient, and contents of the mail object"), and *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313 (Fed. Cir. 2016) (abstract idea of "receiving e-mail (and other data file) identifiers, characterizing e-mail based on the identifiers, and communicating the characterization"). The claims' use of content-based identifiers, therefore, is abstract.

Generating such identifiers via a known algorithm is no less abstract. "[W]e have treated analyzing information

by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (collecting cases)). For instance, the identifiers claimed in *Symantec* were created “using a mathematical algorithm.” 838 F.3d at 1313. And in *RecogniCorp, LLC v. Nintendo Co.*, we explained that “[a] process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea.” 855 F.3d 1322, 1327 (Fed. Cir. 2017). That, too, holds true here.

Second is the step of comparing the content-based identifier against other values. That is also abstract. For example, the *Symantec* claims required “determining . . . whether each received content identifier matches a characteristic of other identifiers.” 838 F.3d at 1313. There, as here, this is the “abstract idea of 1) collecting data[] [and] 2) recognizing certain data within the collected data set.” *Id.* at 1314–15 (quoting *Content Extraction*, 776 F.3d at 1347). That’s a mental process.

Third is the data-management function, which varies across the three patents. Each such function is abstract. Controlling access to data items (the ’310 patent) is abstract, as “[c]ontrolling access to resources is exactly the sort of process that ‘can be performed in the human mind, or by a human using a pen and paper,’ which we have repeatedly found unpatentable.” *Ericsson Inc. v. TCL Commc’n Tech. Holdings Ltd.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020) (quoting *CyberSource*, 654 F.3d at 1372)); *id.* (noting that “[t]he idea . . . is pervasive in human activity,” for example, “in libraries (loaning materials only to card-holding members)”). So is retrieving data items (the ’280 patent). *E.g.*, *Erie*, 850 F.3d at 1327 (“abstract idea of creating an index and using that index to search for and retrieve data” (internal quotation marks omitted)); *Content Extraction*, 776 F.3d at 1347 (“abstract idea of . . . collecting data”). So too is marking data for deletion (the ’662

patent), which is just another way to “classify[] data.” *Erie*, 850 F.3d at 1327; e.g., *Symantec*, 838 F.3d at 1314 (“[I]t was [a] long-prevalent practice for people . . . to look at an envelope and discard certain letters . . . based on characteristics of the mail.”). These are all mental processes and are all abstract.

True, the step-one inquiry “looks to the claim[s] ‘character as a whole’ rather than evaluating each claim limitation in a vacuum.” *Ericsson*, 955 F.3d at 1326 (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016)). But these claims “are clearly focused on the combination of those abstract-idea processes.” *Elec. Power*, 830 F.3d at 1354. Stringing together the claimed steps by “[a]dding one abstract idea . . . to another,” *RecogniCorp*, 855 F.3d at 1327, amounts merely to the abstract idea of using a content-based identifier to perform an abstract data-management function—whether controlling access to data, retrieving data, or marking data for deletion. See, e.g., *Secured Mail*, 873 F.3d at 911 (“[E]ach step of the process uses an identifier . . . to communicate information about a mail object.”).

Some of our cases are particularly analogous and instructive. One of the *Symantec* claims included three steps like the claims here (and in the same order): (1) “creating file content IDs using a mathematical algorithm,” (2) “determining . . . whether each received content identifier matches a characteristic of other identifiers,” and (3) “outputting . . . an indication of the characteristic of the data file based on said step of determining.” 838 F.3d at 1313. Likewise, one of the *Erie* claims required (1) “identifying a first XML tag that is associated with the first term,” followed by (2) “determining whether a first metafile corresponds to the first XML tag,” followed by (3) several data-management functions, including “combining the first set of XML tags into a key” used to “locate records” and “deliver[] the records.” 850 F.3d at 1327. There’s no relevant difference in the claims here. The claims as a whole, then,

are directed to a medley of mental processes that, taken together, amount only to a multistep mental process.

PersonalWeb asserts that the claims are not abstract because they offer a solution “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” Appellant’s Br. 24 (quoting *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)). Not so. Both the solution (names based on content) and the problems (access to, retrieval of, and redundancy control of information) have long predated computers. PersonalWeb contends that the claims are not abstract because they claim “a new way of locating and distributing data in a computer network” that promises efficiency benefits, Appellant’s Br. 24, but “[t]he fact that an identifier can be used to make a process more efficient . . . does not necessarily render an abstract idea less abstract,” *Secured Mail*, 873 F.3d at 910. Here, the asserted efficiency improvements are not different in kind from those that would accrue in the library analogue—for example, using content-based identifiers to purge duplicate books.

Ultimately, “the focus of the claims is not on . . . an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017). In other words, the claims focus on “mere automation of manual processes using generic computers.” *Id.* That fails step one.

II

Onward to step two. Here we undertake “a search for an inventive concept—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Alice*, 573 U.S. at 217–18 (cleaned up). According to PersonalWeb, the claims contain an inventive concept because they “recite an application that

makes inventive use of cryptographic hashes—a use that was neither conventional nor routine prior to the patents.” Appellant’s Br. 12; *see also id.* at 38–39 (describing “using content-dependent cryptographic hashes in place of conventional names”). But that’s not something “more,” let alone anything “significantly more,” than the abstract idea itself. *Alice*, 573 U.S. at 218.

Indeed, the purported improvements that PersonalWeb sets forth just restate the abstract ideas discussed above. *See* Appellant’s Br. 43 (“[T]he claims of the ’310 patent capture the improvement of using the content-based identifier to ‘enforce[] use of valid licenses . . . by refusing to provide access to a file without authorization.’” (third alteration in original) (quoting ’310 patent col. 31 ll. 9–12)); *id.* (“The claims of the ’280 patent capture the improvements of ‘provid[ing] transparent access to any data item by reference only to its identity’ and ‘verify[ing] that data retrieved from another location is the desired or requested data, using only the data identifier.’” (alterations in original) (quoting ’280 patent col. 4 ll. 10–45)); *id.* (“The claims of the ’662 patent capture the improvements of ‘stor[ing] at most one copy of the data item’ and ‘maintain[ing] a desired level of redundancy of data items.’” (alterations in original) (quoting ’662 patent col. 4 ll. 4–21)). That is all abstract. And even accepting PersonalWeb’s view that these particular uses are not well-known, routine, or conventional, “[a] claim for a *new* abstract idea is still an abstract idea.” *SAP*, 898 F.3d at 1163 (quoting *Synopsys*, 839 F.3d at 1151).

So, “[w]hat else is there in the claims before us?” *Mayo*, 566 U.S. at 78. As to the subject-matter question, not much. The district court had it right: there is “nothing ‘inventive’ about any claim details, individually or in combination, that are not themselves abstract ideas.” *PersonalWeb*, 2020 WL 520618, at *13. The district court was also right that “[u]sing a generic hash function, a server system, or a computer does not render these claims non-abstract.” *Id.* “[O]ur precedent is clear that merely

adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea.” *Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015); e.g., *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”). PersonalWeb’s claims merely “automate or otherwise make more efficient traditional . . . methods.” *OIP*, 788 F.3d at 1363. “[T]heir innovation is an innovation in ineligible subject matter.” *SAP*, 898 F.3d at 1163. That fails step two.

Last, PersonalWeb argues also that “fact questions created by the specification’s disclosure” made judgment on the pleadings “improper.” Appellant’s Br. 51 (quoting *Berkheimer*, 881 F.3d at 1370). While we agree that “the most relevant and dispositive evidence before the district court was the set of patents themselves,” Appellant’s Br. 50, we disagree that this could have precluded judgment on the pleadings here. “What is needed is an inventive concept in the non-abstract application realm.” *SAP*, 898 F.3d at 1168. None of PersonalWeb’s “improvements in the specification” fit that bill. Appellant’s Br. 51. Instead, they “lie[] entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm.” *SAP*, 898 F.3d at 1163. Judgment on the pleadings, therefore, was appropriate.

CONCLUSION

We have considered PersonalWeb’s remaining arguments and find them unpersuasive. The claims are ineligible for patenting. We therefore affirm the judgment of invalidity.

AFFIRMED

CERTIFICATE OF SERVICE

I certify that a true and correct copy of this APPELLANT PERSONALWEB TECHNOLOGIES LLC'S PETITION FOR REHEARING EN BANC was served on this 27th day of September, 2021 by operation of the Court's CM/ECF system on all counsel of record.

Dated: September 27, 2021

/s/ Lawrence M. Hadley
Lawrence M. Hadley

CERTIFICATE OF COMPLIANCE

I certify that this Petition or Appellant PersonalWeb Technologies LLC:

1. Complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) and Fed. Cir. R. 32(a). This brief contains 3,877 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(f) and Fed. Cir. R. 32(b). Microsoft Word was used to calculate the word count.

2. Complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6). This brief has been prepared in a proportionally-spaced typeface using Microsoft Word in 14-point Times New Roman type style.

Dated: September 27, 2021

/s/ Lawrence M. Hadley
Lawrence M. Hadley