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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

TS PATENTS LLC,
Plaintiff,
v.
YAHOO! INC.,
Defendant.

Case No. 17-CV-01721-LHK

**ORDER GRANTING DEFENDANT’S
MOTION TO DISMISS**

Re: Dkt. No. 17

Plaintiff TS Patents LLC (“TS Patents” or “Plaintiff”) filed a patent infringement suit against Defendant Yahoo! Inc. (“Yahoo” or “Defendant”) and alleged that Defendant infringed the claims of U.S. Patent Nos. 9,280,547 (the “547 patent”), 8,799,473 (the “473 patent”), 8,713,442 (the “442 patent”), and 8,396,891 (the “891 patent”) (collectively, the “Asserted Patents”). Before the Court is Defendant’s Motion to Dismiss, which seeks to dismiss all four Asserted Patents. ECF No. 17 (“Mot.”). Having considered the submissions of the parties, the relevant law, and the record in this case, the Court GRANTS Defendant’s Motion to Dismiss.

I. BACKGROUND

A. Factual Background

1. The Parties

Plaintiff TS Patents is a California limited liability company with its registered office in Fremont, California. ECF No. 1 (“Compl.”) ¶ 2. Defendant Yahoo! is a Delaware corporation with its principal place of business in Sunnyvale, California. Compl. ¶ 3.

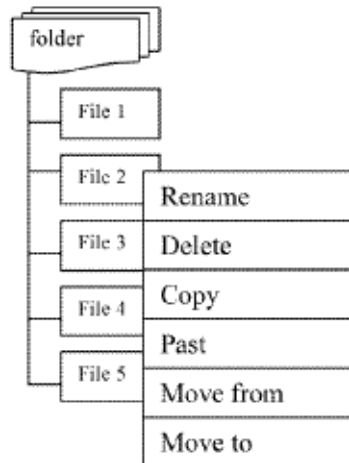
2. The Asserted Patents

a. ’547 Patent

The ’547 patent is titled “System and Method for Displaying and Operating Multi-Layered Item List in Browser with Supporting of Concurrent Users.” Compl., Ex. E (’547 patent). It was filed on June 10, 2013 and issued on March 8, 2016.

The ’547 patent generally relates to allowing an “end-user to view and operate computing resources through [a] logically organized and graphically represented multi-layered item list” or “hierarchical list.” ’547 patent, Abstract. This hierarchical list is displayed to the end-user through a web browser, and can be expanded or collapsed so that the web browser does not have to display the entire hierarchy at once. *Id.*, Abstract, col. 11:45–50, col. 12:1–13. The hierarchical list can be used to represent a variety of remote computing resources, such as folders and files stored on a remote server. *Id.*, Abstract. For example, Figure 6B illustrates a hierarchical list that is used to represent folders and files stored on a remote server:

6 b) an operation menu for managing files and folders.



Id., Fig. 6B.

1 Plaintiff asserts that Defendant infringes at least claim 1 of the '547 patent. Compl., Ex. J.
2 Claim 1 recites:

3 A server supporting a plurality of users access to remote folder structures, the server
4 comprising:
5 memory, and non-transitory computer-readable medium comprising program
6 code which, being executed by the server, configures the server to:
7 create a first per user-session hierarchical list in the memory for a user session
8 initiated via a first end-user device by a first one of the users for access to a
9 folder structure served by the server, the first hierarchical list representing
10 the folder structure in a reduced form, the folder structure comprising one
11 or more folders, where each of the one or more folders is used for holding
12 at least one data object,
13 send a user interface comprising the first hierarchical list to the first end-user
14 device to be displayed thereon, the displayed first hierarchical list being
15 navigated by the first one of the users to request access to the folder
16 structure;
17 process the request for access to the folder structure received from the first end-
18 user device, wherein the program code to process the request includes to
19 update the folder structure, and also update the first hierarchical list in the
20 memory to reflect the updated folder structure in accordance to the request,
21 wherein the server sends an updated user interface comprising the updated
22 first hierarchical list to the first end-user device to be displayed thereon
23 during the user session, and deletes the first hierarchical list from the
24 memory in response to exit of the user session.

25 *Id.*, col. 14:52–15:15.

26 **b. '473 Patent**

27 The '473 patent is titled “Concurrent Web Based Multi-task Support for Computer
28 System.” Compl., Ex. D ('473 patent). It was filed on March 4, 2008 and issued on August 5,
2014. It is a continuation of U.S. Patent No. 7,418,702, which was filed on August 6, 2002.

The '473 patent generally relates to “web based multitasking.” '473 patent, Abstract.
According to the '473 patent, traditional web servers “d[id] not support multiple concurrent tasks
or operations submitted from the same web browser.” *Id.*, col. 2:18–20. Instead, a previous task
had to be completed until the next could be performed. *Id.*, col. 2:24–34.

The '473 patent purports to solve this problem by providing a way in which tasks initiated
from a web browser can be performed in parallel. *Id.*, col. 2:35–37. It accomplishes this by

1 keeping track of the initiated tasks, such as through a “user space task list,” and protecting this
2 task list with a lock. *Id.*, col. 2:46–49. A “[l]ock is a mechanism that allows a thread¹ to lo[c]k a
3 computer resource for its own use and prevents other threads from access to the same computer
4 resource at the same time.” *Id.*, col. 3:16–19. The ’473 specification discloses that, when a user
5 initiates a task from a web browser, “[a] thread is created . . . where the thread will serve and carry
6 [out] this task in the background.” *Id.*, col. 6:43–45. The thread then obtains the lock for the task
7 list, modifies the task list to add the new task to the list, and releases the lock. *Id.*, col. 6:45–47,
8 Fig. 5. The thread corresponding to this task is then executed concurrently with other threads
9 corresponding to other tasks in the task list. *See id.*, col. 6:47–50. After the task completes, the
10 thread again obtains the lock for the task list, removes the task from the task list, and then releases
11 the lock. *See id.*, col. 6:57–59.

12 The specification also discloses that, in addition to the task list, shared resources which
13 may be accessed by multiple threads (which, as discussed above, are each created to execute
14 separate tasks) are protected by locks. *Id.*, col. 6:54–56, col. 6:64–7:4. To modify a shared
15 resource, a thread must obtain the lock for that shared resource, modify that shared resource, and
16 then release the lock. *Id.* If a second thread also wants to modify that same shared resource, it
17 must wait until the first thread releases the lock so that the second thread can then obtain the lock
18 and modify the shared resource. *Id.*, col. 6:64–7:4.

19 Plaintiff asserts that Defendant infringes at least claim 1 of the ’473 patent. Compl., Exs.
20 H, I. Claim 1 recites:

- 21 1. A server supporting access to resources, the server comprising: at least one
22 hardware processor, and a network interface; wherein the server is configure to
perform followings:

23 causing display of information about resources organized by the server in a web
24 browser on a first end-user device;

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27 ¹ The ’473 patent defines a thread as “a sequence of instructions based on a piece of program code
28 that starts to be executed by a computer system step by step to carry out a computer task.” ’473
patent, col. 3:11–15.

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receiving a first request, for access a first resource, from the first end-user device upon a first user selecting the first resource from the information displayed on the first end-user device and submitting the first request;

storing information about the first request and invoking a lock protection to protect the storing of the first request;

processing the first request, including to process the first request in the background and cause the display of the information about the resources without blocking in the web browser during a regular network traffic to allow the first user selecting a second resource from the information displayed on the first end-user device and submitting a second request for access to the second resource without waiting for the completion of the first request; and deleting the stored information about the first request when the first request is completed.

Id., col. 9:8–10:4.

c. '442 and '891 Patents

The '442 patent is titled “Method and Apparatus for Information Exchange Over a Web Based Environment.” Compl., Ex. C ('442 patent). It was filed on April 5, 2011 and issued on April 29, 2014. It claims priority to a provisional application, which was filed on March 31, 2006. The '442 patent is also a divisional application of U.S. Patent Application No. 11/732,496 (“the '496 application”), which was filed on April 2, 2007.

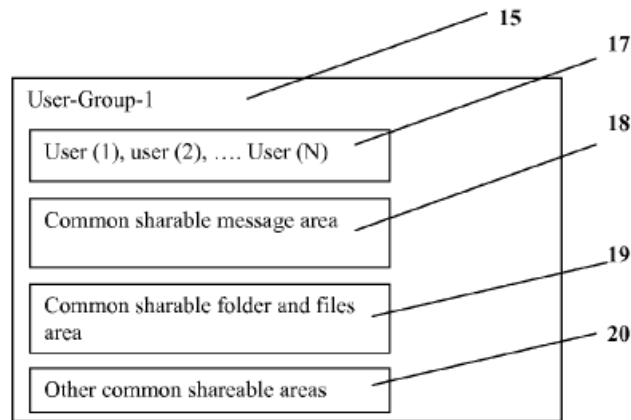
The '891 patent is titled “Method and Apparatus of Dynamic Updating Web Portals.” Compl., Ex. B ('891 patent). It was filed on December 14, 2011 and issued on March 12, 2013. It is a continuation of U.S. Patent Application No. 12/511,039, which was filed on July 29, 2009 and which is in turn a continuation-in-part of the '496 application, mentioned above.

Typical of patents that share a common lineage, the '442 and the '891 patents have identical figures and substantially similar written descriptions. *Compare* '442 patent, col. 3:53–21:67, *with* '891 patent, col. 5:27–28:40. The Court will thus overview these patents together.

The '442 and '891 patents generally relate to a communication platform over which users can share information and resources, such as folders and files. '442 patent, Abstract; '891 patent, Abstract. In particular, the specifications disclose a “web-based computer user work/operation environment (‘WCUWE’),” which provides a centrally controlled collection of “work spaces,” which are either private to a specific user or shared among groups of users. '442 patent, col.

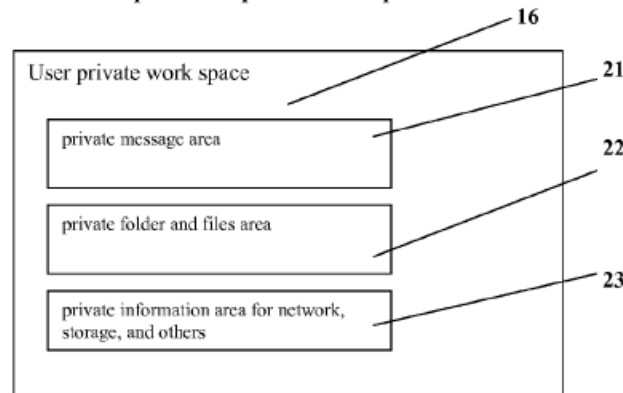
1 10:31–11:16; '891 patent, 15:4–54. Each work space can store messages, folders, files, or other
 2 resources specific to that work space. *Id.* Figures 4B and 4C illustrate shared and private work
 3 spaces, respectively:

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 5 **Fig. 4B: an example of resource may be assigned to a user-group common work space.**



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 12 **Fig. 4B**

13 **Fig. 4C: an example of user private work space.**



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 20 **Fig. 4C**

21 '442 patent, Figs. 4B, 4C; '891 patent, Figs. 4B, 4C.

22 A user can access the private and shared work spaces to which he belongs through a web
 23 browser. '442 patent, col. 12:5–17; '891 patent, col. 17:15–29. Through the web browser, the
 24 user can also post and un-post messages, folders, and files to a work space, as well as move
 25 folders and files from one workspace to another. *Id.* For example, Figure 6A illustrates a web
 26 page where user X can access messages, folders, and files in both his private space and also in the
 27 shared space belonging to user-group-1, a group to which he belongs:

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Fig. 6A: An example of displaying a web-page with 4 sections in web-browser of user X in user-group-1 during an interactive online meeting.

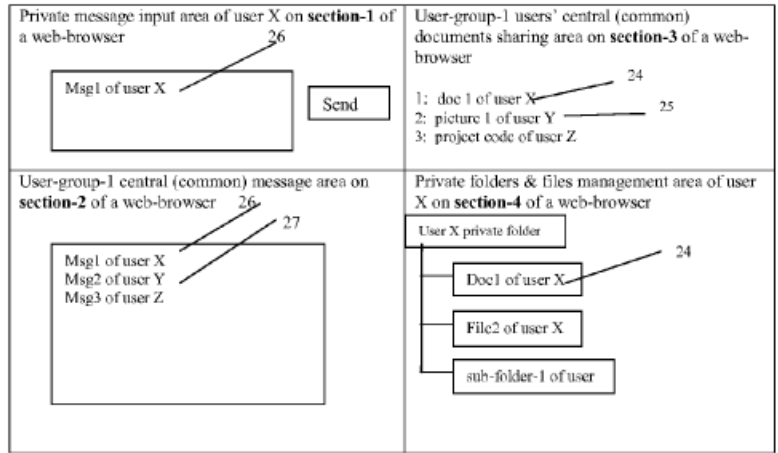


Fig. 6A

'442 patent, Fig. 6A; '891 patent, Fig. 6A.

Plaintiff asserts that Defendant infringes at least claim 9 of the '442 patent. Compl., Ex. G.

Claim 9 recites:

A server in a collaboration system supporting virtual presentation between a plurality of users, the server comprising:

at least one hardware processor, and

program code which, when executed by the at least one hardware processor, causes the server to:

display a first user interface comprising metadata of files and folders, residing in the server or in at least one computing device, on a first end-user device to allow a first user selecting one selected file or one selected folder from the metadata displayed and requesting the metadata of the selected file or folder to be posted to a second user interface;

store the metadata information, but not content, of the selected file or the selected folder according to the request for the posting received from the first end-user device; and

display to a second user the stored metadata of the selected file or the selected folder including to display a graphic indicator of the selected file or folder in the second user interface on a second end-user device to allow the second user access to the content of the selected file or selected folder through the stored metadata displayed in the second user interface.

'442 patent, col. 23:4–27.

1 Plaintiff asserts that Defendant infringes at least claim 1 of the '891 patent. Compl., Ex. F.
2 Claim 1 recites:

- 3 1. A computing device comprising a processor, memory and program code which,
4 when executed by the processor, configures the device to:
- 5 (i) display a user interface to each of a first user and a second user to share
6 information, wherein each of the user interfaces comprises, for each of the first
7 and second users, (a) a private section configured to display information about
8 files or folders available for the user to share and (b) a common section
9 configured to display information about files or folders shared with the user;
 - 10 (ii) share a file or folder selected, from the available files or folders, by the first user
11 with the second user by (a) allowing the first user to identify the file or folder
12 in the private section on the first user's interface, which is not viewable by the
13 second user, (b) unlocking a protection mechanism of the file or folder to allow
14 access to the second user, (c) storing information about the file or folder,
15 without the content of the file or folder, in a common work place accessible to
16 both the first user and the second user, and (d) displaying information about the
17 file or folder in the common section on the second user's interface, wherein the
18 second user can access the file or folder through the displayed information; and
 - 19 (iii) stop sharing of a file or folder to the second user that the first user has
20 previously shared with the second user by (a) deleting information about the
21 file or folder displayed in the common section on the second user's interface,
22 (b) deleting information about the file or folder that has been stored in the
23 common work place, and (c) locking the protection mechanism to rescind
24 access to the second user.

25 '891 patent, col. 28:42–29:5.

26 **II. LEGAL STANDARD**

27 **A. Motion to Dismiss Pursuant to Federal Rule of Civil Procedure 12(b)(6)**

28 Pursuant to Federal Rule of Civil Procedure 12(b)(6), a defendant may move to dismiss an
action for failure to allege “enough facts to state a claim to relief that is plausible on its face.” *Bell
Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007). “A claim has facial plausibility when the
plaintiff pleads factual content that allows the court to draw the reasonable inference that the
defendant is liable for the misconduct alleged. The plausibility standard is not akin to a
‘probability requirement,’ but it asks for more than a sheer possibility that a defendant has acted
unlawfully.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (citations omitted). For purposes of
ruling on a Rule 12(b)(6) motion, the Court “accept[s] factual allegations in the complaint as true
and construe[s] the pleadings in the light most favorable to the nonmoving party.” *Manzarek v. St.*

1 claimed subject matter,” the question of patent eligibility may properly be resolved on the
2 pleadings. *Content Extraction*, 776 F.3d at 1349; *see also Cardpool, Inc. v. Plastic Jungle, Inc.*,
3 2013 WL 245026, at *4 (N.D. Cal. Jan. 22, 2013) (same), *aff’d*, 817 F.3d 1316 (Fed. Cir. 2016).

4 **C. Substantive Legal Standards Applicable Under 35 U.S.C. § 101**

5 **1. Patent-Eligible Subject Matter Under 35 U.S.C. § 101**

6 Section 101 of Title 35 of the United States Code “defines the subject matter that may be
7 patented under the Patent Act.” *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). Under § 101, the
8 scope of patentable subject matter encompasses “any new and useful process, machine,
9 manufacture, or composition of matter, or any new and useful improvement thereof.” *Id.* (quoting
10 35 U.S.C. § 101). These categories are broad, but they are not limitless. Section 101 “contains an
11 important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not
12 patentable.” *Alice*, 134 S. Ct. at 2354 (quotation marks omitted). These three exceptions are not
13 patent-eligible because “they are the basic tools of scientific and technological work,” which are
14 “free to all men and reserved exclusively to none.” *Mayo Collaborative Servs. v. Prometheus*
15 *Labs., Inc.*, 566 U.S. 66, 70 (2012) (quotation marks omitted). The United States Supreme Court
16 has explained that allowing patent claims for such purported inventions would “tend to impede
17 innovation more than it would tend to promote it,” thereby thwarting the primary object of the
18 patent laws. *Id.* at 70. However, the United States Supreme Court has also cautioned that “[a]t
19 some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural
20 phenomena, or abstract ideas.” *Alice*, 134 S. Ct. at 2354 (quotation marks and alterations
21 omitted). Accordingly, courts must “tread carefully in construing this exclusionary principle lest it
22 swallow all of patent law.” *Id.*

23 In *Alice*, the leading case on patent-eligible subject matter under § 101, the United States
24 Supreme Court refined the “framework for distinguishing patents that claim laws of nature, natural
25 phenomena, and abstract ideas from those that claim patent-eligible applications of those
26 concepts” originally set forth in *Mayo*, 566 U.S. at 77. This analysis, generally known as the
27 “*Alice*” framework, proceeds in two steps as follows:

1 First, we determine whether the claims at issue are directed to one of those patent-
2 ineligible concepts. If so, we then ask, “[w]hat else is there in the claims before
3 us?” To answer that question, we consider the elements of each claim both
4 individually and “as an ordered combination” to determine whether the additional
5 elements “transform the nature of the claim” into a patent-eligible application. We
6 have described step two of this analysis as a search for an “‘inventive concept’
7 “—i.e., an element or combination of elements that is “sufficient to ensure that the
8 patent in practice amounts to significantly more than a patent upon the [ineligible
9 concept] itself.”

10 *Alice*, 134 S. Ct. at 2355 (citations omitted and alterations in original); *see also In re TLI*
11 *Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (describing “the now familiar
12 two-part test described by the U.S. Supreme Court in *Alice*”).

13 **2. *Alice* Step One—Identification of Claims Directed to an Abstract Idea**

14 Neither the U.S. Supreme Court nor the Federal Circuit has set forth a bright line test
15 separating abstract ideas from concepts that are sufficiently concrete so as to require no further
16 inquiry under the first step of the *Alice* framework. *See, e.g., Alice*, 134 S. Ct. at 2357 (noting that
17 “[the U.S. Supreme Court] need not labor to delimit the precise contours of the ‘abstract ideas’
18 category in this case”); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir.
19 2014) (observing that the U.S. Supreme Court did not “delimit the precise contours of the ‘abstract
20 ideas’ category in *Alice*”) (quotation marks omitted). As a result, in evaluating whether particular
21 claims are directed to patent-ineligible abstract ideas, courts have generally begun by
22 “compar[ing] claims at issue to those claims already found to be directed to an abstract idea in
23 previous cases.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

24 Two of the U.S. Supreme Court’s leading cases concerning the “abstract idea” exception
25 involved claims held to be abstract because they were drawn to longstanding, fundamental
26 economic practices. *See Alice*, 134 S. Ct. at 2356 (claims “drawn to the concept of intermediated
27 settlement, *i.e.*, the use of a third party to mitigate settlement risk” were directed to an
28 unpatentable abstract idea); *Bilski*, 561 U.S. at 611-12 (claims drawn to “the basic concept of
hedging, or protecting against risk” were directed to an unpatentable abstract idea because
“[h]edging is a fundamental economic practice long prevalent in our system of commerce and
taught in any introductory finance class.”) (quotation marks omitted).

1 Similarly, the U.S. Supreme Court has recognized that information itself is intangible. *See*
 2 *Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12, 127 S. Ct. 1746, 167 L.Ed.2d 737
 3 (2007). Accordingly, the Federal Circuit has generally found claims abstract where they are
 4 directed to some combination of collecting information, analyzing information, and/or displaying
 5 the results of that analysis. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094-95
 6 (Fed. Cir. 2016) (claims “directed to collecting and analyzing information to detect misuse and
 7 notifying a user when misuse is detected” were drawn to an unpatentable abstract idea); *In re TLI*
 8 *Commc’ns LLC Patent Litig.*, 823 F.3d at 611 (claims were “directed to the abstract idea of
 9 classifying and storing digital images in an organized manner”); *Elec. Power Grp., LLC v. Alstom*
 10 *S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (claims directed to an abstract idea because “[t]he
 11 advance they purport to make is a process of gathering and analyzing information of a specified
 12 content, then displaying the results, and not any particular assertedly inventive technology for
 13 performing those functions”); *see also id.* (collecting cases).

14 However, the determination of whether other types of computer-implemented claims are
 15 abstract has proven more “elusive.” *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790
 16 F.3d 1343, 1345 (Fed. Cir. 2015) (“[P]recision has been elusive in defining an all-purpose
 17 boundary between the abstract and the concrete.”) As a result, in addition to comparing claims to
 18 prior U.S. Supreme Court and Federal Circuit precedents, courts considering computer-
 19 implemented inventions have taken varied approaches to determining whether particular claims
 20 are directed to an abstract idea.

21 For example, courts have considered whether the claims purport to “improve the
 22 functioning of the computer itself,” *Alice*, 134 S. Ct. at 2359, which may suggest that the claims
 23 are not abstract, or instead whether “computers are invoked merely as a tool” to carry out an
 24 abstract process. *Enfish*, 822 F.3d at 1335; *see also id.* (noting that “some improvements in
 25 computer-related technology when appropriately claimed are undoubtedly not abstract, such as a
 26 chip architecture, an LED display, and the like. Nor do we think that claims directed to software,
 27 as opposed to hardware, are inherently abstract[.]”). The Federal Circuit has followed this

1 approach to find claims patent-eligible in several cases. *See Visual Memory LLC v. NVIDIA*
 2 *Corp.*, No. 2016-2254, 2017 WL 3481288, at *4 (Fed. Cir. Aug. 15, 2017) (claims directed to an
 3 improved memory system were not abstract because they “focus on a ‘specific asserted
 4 improvement in computer capabilities’—the use of programmable operational characteristics that
 5 are configurable based on the type of processor”) (quoting *Enfish*, 822 F.3d at 1336); *McRO, Inc.*
 6 *v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (claims directed to
 7 automating part of a preexisting method for 3-D facial expression animation were not abstract
 8 because they “focused on a specific asserted improvement in computer animation, i.e., the
 9 automatic use of rules of a particular type.”); *Enfish*, 822 F.3d at 1335–36 (claims directed to a
 10 specific type of self-referential table in a computer database were not abstract because they
 11 focused “on the specific asserted improvement in computer capabilities (i.e., the self-referential
 12 table for a computer database”).

13 Similarly, the Federal Circuit has found that claims directed to a “new and useful
 14 technique” for performing a particular task were not abstract. *Thales Visionix Inc. v. United*
 15 *States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017) (holding that “claims directed to a new and useful
 16 technique for using sensors to more efficiently track an object on a moving platform” were not
 17 abstract); *Rapid Litigation Management Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1045, 1050 (Fed.
 18 Cir. 2016) (holding that claims directed to “a new and useful laboratory technique for preserving
 19 hepatocytes,” a type of liver cell, were not abstract); *see also Diamond v. Diehr*, 450 U.S. 175,
 20 177, 101 S. Ct. 1048, 67 L.Ed.2d 155 (1981) (holding that claims for a method to calculate the
 21 optimal cure time for rubber were not abstract).

22 Another helpful tool used by courts in the abstract idea inquiry is consideration of whether
 23 the claims have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . .
 24 practice long prevalent in our system” *Alice*, 134 S. Ct. at 2356; *see, e.g., Intellectual*
 25 *Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1317 (Fed. Cir. 2016) (finding an email
 26 processing software program to be abstract through comparison to a “brick and mortar” post
 27 office); *Intellectual Ventures I LLC v. Symantec Corp.*, 100 F. Supp. 3d 371, 383 (D. Del. 2015)

1 (“Another helpful way of assessing whether the claims of the patent are directed to an abstract idea
2 is to consider if all of the steps of the claim could be performed by human beings in a non-
3 computerized ‘brick and mortar’ context.”) (citing *buySafe*, 765 F.3d at 1353).

4 Courts will also (or alternatively, as the facts require) consider a related question of
5 whether the claims are, in essence, directed to a mental process or a process that could be done
6 with pen and paper. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1147 (Fed. Cir.
7 2016) (claims for translating a functional description of a logic circuit into a hardware component
8 description of the logic circuit were invalid because they “can be performed mentally or with
9 pencil and paper”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir.
10 2011) (claim for verifying the validity of a credit card transaction over the Internet was invalid
11 because the “steps can be performed in the human mind, or by a human using a pen and paper”);
12 *see also, e.g., Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed.
13 Cir. 2016) (claims for computer-implemented system to enable borrowers to anonymously shop
14 for loan packages were abstract where “[t]he series of steps covered by the asserted claims . . .
15 could all be performed by humans without a computer”).²

16 Regardless of the particular analysis that is best suited to the specific facts at issue in a
17 case, however, the Federal Circuit has emphasized that “the first step of the [*Alice*] inquiry is a
18 meaningful one, i.e., . . . a substantial class of claims are *not* directed to a patent-ineligible
19 concept.” *Enfish*, 822 F.3d at 1335 (emphasis in original). The court’s task is thus not to
20 determine whether claims merely involve an abstract idea at some level, *see id.*, but rather to
21 examine the claims “in their entirety to ascertain whether their character as a whole is directed to
22 excluded subject matter.” *Internet Patents*, 790 F.3d at 1346.

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25 ² One court has noted that, like all tools of analysis, the “pencil and paper” analogy must not be
26 unthinkingly applied. *See California Inst. of Tech. v. Hughes Commc’ns Inc.*, 59 F. Supp. 3d 974,
27 995 (C.D. Cal. 2014) (viewing pencil-and-paper test as a “stand-in for another concern: that
28 humans engaged in the same activity long before the invention of computers,” and concluding that
test was unhelpful where “error correction codes were not conventional activity that humans
engaged in before computers”).

1 patentable.” 561 U.S. at 612 (citing *Parker v. Flook*, 437 U.S. 584 (1978)); *see also Alice*, 134 S.
2 Ct. at 2358 (same). The Federal Circuit has similarly stated that attempts “to limit the use of the
3 abstract idea to a particular technological environment” are insufficient to render an abstract idea
4 patent eligible. *Ultramercial*, 772 F.3d at 716 (quotation marks omitted); *see also Intellectual*
5 *Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015) (“An abstract
6 idea does not become nonabstract by limiting the invention to a particular field of use or
7 technological environment, such as the Internet.”).

8 In keeping with these restrictions, the Federal Circuit has found that claims “necessarily
9 rooted in computer technology in order to overcome a problem specifically arising in the realm of
10 computer networks” can be sufficiently transformative to supply an inventive concept. *DDR*, 773
11 F.3d at 1257 (claims that addressed the “Internet-centric problem” of third-party merchant
12 advertisements that would “lure . . . visitor traffic away” from a host website amounted to an
13 inventive concept).

14 In addition, a “non-conventional and non-generic arrangement of known, conventional
15 pieces” can amount to an inventive concept. *BASCOM*, 827 F.3d at 1350. For example, in
16 *BASCOM*, the Federal Circuit addressed a claim for internet content filtering performed at “a
17 specific location, remote from the end-users, with customizable filtering features specific to each
18 end user.” *Id.* Because this “specific location” was different from the location where internet
19 content filtering was traditionally performed, the Federal Circuit concluded this was a “non-
20 conventional and non-generic arrangement of known, conventional pieces” that provided an
21 inventive concept. *Id.* As another example, in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, the
22 Federal Circuit found that claims relating to solutions for managing accounting and billing data
23 over large, disparate networks recited an inventive concept because they contained “specific
24 enhancing limitation[s] that necessarily incorporate[d] the invention’s distributed architecture.”
25 841 F.3d 1288, 1301 (Fed. Cir. 2016). The use of a “distributed architecture,” where information
26 about accounting and billing data was stored near the source of the information in the “disparate
27 networks,” transformed the claims into patentable subject matter. *Id.*

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4. Preemption

In addition to these principles, courts sometimes find it helpful to assess claims against the policy rationale for § 101. The United States Supreme Court has recognized that the “concern that undergirds [the] § 101 jurisprudence” is preemption. *Alice*, 134 S. Ct. at 2358. Thus, if a claim is so abstract so as to “pre-empt use of [the claimed] approach in all fields, and would effectively grant a monopoly over an abstract idea,” it is not patent-eligible. *Bilski* 561 U.S. at 612.

However, the inverse is not true: “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *FairWarning*, 839 F.3d at 1098 (internal quotation marks and citation omitted).

III. DISCUSSION

Defendant’s Motion to Dismiss contends that the asserted claims of the Asserted Patents fall within the patent-ineligible “abstract ideas” exception to § 101. The Court applies the *Alice* framework described above to these claims.

A. The ’547 Patent

The Court first turns to the ’547 patent and determines whether the asserted claims of this patent are patent-ineligible under § 101.

1. Scope of Analysis and Representative Claim

Before turning to the substance of the parties’ eligibility arguments, the Court clarifies the scope of the claims to be assessed. Plaintiff has asserted that Defendant infringes at least claim 1 of the ’547 patent. Compl. Ex. J. However, Plaintiff has not specifically identified whether it also asserts other claims of the ’547 patent against Defendant. Nevertheless, the Federal Circuit has held that a district court need not expressly address each asserted claim where the court concludes particular claims are representative because all the claims are “substantially similar and linked to the same abstract idea.” *Content Extraction*, 776 F.3d at 1348 (quotation marks omitted); *see also Mortgage Grader*, 811 F.3d at 1324 n.6 (court did not err by discussing only one claim where claims did not “differ in any manner that is material to the patent-eligibility inquiry”); *Alice*, 134 S. Ct. at 2359–60 (finding 208 claims to be patent-ineligible based on analysis of one

1 representative claim). Here, the Court finds that claim 1 is sufficiently representative of the
 2 remaining claims in the '547 patent, as the other independent claims recite substantially similar
 3 limitations and the dependent claims introduce minor variations that do not shift the *Alice*
 4 analysis.³ Thus, although the Court will focus its analysis on claim 1 of the '547 patent, its
 5 analysis herein is equally applicable to the remaining claims.

6 **2. *Alice* Step One for Claim 1 of the '547 Patent—Whether the Claim is Directed to**
 7 **an Abstract Idea**

8 Step one of the *Alice* framework directs the Court to assess “whether the claims at issue are
 9 directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. On this point, Defendant contends that
 10 claim 1 is directed to “organizing and viewing data in a hierarchy.” Mot. 5. Defendant argues that
 11 this is an abstract idea because “[c]laims aimed at organizing and displaying information are
 12 routinely found to be directed to abstract ideas.” *Id.* at 6. Defendant also argues that claim 1 does
 13 not recite a particular technical improvement to computer technology, and thus cannot be
 14 analogized to *Enfish*. *Id.* at 7.

15 Plaintiff responds that claim 1 is not directed to an abstract idea because it is instead
 16 directed to a specific improvement in computer network technology. Opp’n at 21–24.
 17 Specifically, Plaintiff argues that claim 1 is directed to multi-level web folders, which constitute
 18 an improvement in computer network technology because they only require a small amount of
 19 information about particular sub-folders or files be transmitted over the network at a time. *Id.*
 20 This, according to Plaintiff, saves bandwidth and improves efficiency. *Id.*

21 The step one inquiry “applies a stage-one filter to claims, considered in light of the

23 ³ Specifically, independent claims 6 and 12 also recite the same basic steps of: (1) “creat[ing] . . . a
 24 . . . hierarchical list . . . ,” (2) “send[ing] a user interface . . . ,” and (3) “process[ing] the request for
 25 access” ’547 patent, col. 14:52–15:15, col. 15:34–56, col. 16:18–48. Dependent claims 2–5,
 26 7–11, and 13–20 introduce additional minor limitations to these basic steps. For example, claims
 27 2 and 13 make it explicit that multiple users can concurrently access resources through the
 hierarchical list. *Id.*, col. 15:16–23, col. 16:48–56. Claims 4, 5, and 20 provide more detail on
 what constitutes a “data object.” *Id.*, col. 15:30–33, col. 17:22–24. Claims 7, 8, 10, 14, 15, 17,
 and 18 add additional contours to how a user can navigate or manipulate the hierarchical list. *Id.*,
 col. 15:57–67, col. 16:57–65, col. 17:8–16.

1 specification, based on whether ‘their character as a whole is directed to excluded subject matter.’”
 2 *Enfish*, 822 F.3d at 1335. Thus, the Court conducts its step one inquiry by first identifying what
 3 the “character as a whole” of claim 1 of the ’547 patent is “directed to,” and then discussing
 4 whether this is an abstract idea.

5 **a. Claim 1 of the ’547 Patent—“Directed to” Inquiry**

6 The Court begins by examining claim 1 of the ’547 patent in its entirety to understand
 7 what its “character as a whole” is “directed to.” *Elec. Power*, 830 F.3d at 1353 (“[W]e have
 8 described the first-stage inquiry as looking at the ‘focus’ of the claims, their ‘character as a whole .
 9”); *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir.
 10 2013) (“[T]he court must first identify and define whatever fundamental concept appears wrapped
 11 up in the claim.”) (quotation marks omitted). In distilling the purpose of a claim, the Court is
 12 careful not to express the claim’s fundamental concept at an unduly “high level of abstraction . . .
 13 untethered from the language of the claims,” but rather at a level consonant with the level of
 14 generality or abstraction expressed in the claims themselves. *Enfish*, 822 F.3d at 1337; *see also*
 15 *Thales Visionix*, 850 F.3d at 1347 (“We must therefore ensure at step one that we articulate what
 16 the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.”).

17 Here, the Court finds that claim 1 of the ’547 patent is directed to *organizing and viewing*
 18 *data on a network in a reducible hierarchy*. At a high level, claim 1 recites three major steps:
 19 (1) creating a “hierarchical list” which represents a “reduced form” of a “folder structure” stored
 20 on a “server,” where the “folders” in the “folder structure” hold “data object[s],” ’547 patent, col.
 21 14:58–65; (2) displaying the “hierarchical list” to a user, *id.*, col. 14:66–15:3; and (3) when the
 22 user “request[s] access” to a folder in the “hierarchical list,” updating the “hierarchical list” and
 23 the display to “reflect the updated folder structure in accordance to the request,” *id.*, col. 15:4–15.
 24 For example, for a shared network drive storing a company’s documents in nested folders, these
 25 steps would be: (1) creating a “hierarchical list” of the top-level folders in that drive;
 26 (2) displaying a list of top-level folders to the user; and (3) when the user selected one of the
 27 folders in the list, updating the “hierarchical list” and its display to show an expanded view of the

1 top-level folders and the sub-folders of the selected folder. *See id.*, col. 14:58–15:15. The focus
 2 of these steps is on the “hierarchical list,” which permits organizing and viewing network data,
 3 such as folders and files. Thus, *organizing and viewing data on a network in a reducible*
 4 *hierarchy* accurately captures what the “character as a whole” of claim 1 is “directed to.”

5 **b. Claim 1 of the ’547 Patent—Abstract Idea Analysis**

6 Having determined the “character as a whole” of claim 1 of the ’547 patent, the question
 7 becomes whether this is an abstract idea. *Enfish*, 822 F.3d at 1335 (directing courts to “appl[y] a
 8 stage-one filter to claims, considered in light of the specification, based on whether ‘their character
 9 as a whole is directed to excluded subject matter.’”).

10 As discussed above, courts will generally begin this inquiry by “compar[ing] claims at
 11 issue to those claims already found to be directed to an abstract idea in previous cases.” *Enfish*,
 12 822 F.3d at 1334. This analysis alone can be “sufficient.” *Id*; *see, e.g., Alice*, 134 S. Ct. at 2356
 13 (concluding that the claims were directed to an abstract idea because “[i]t is enough to recognize
 14 that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the
 15 concept of intermediated settlement at issue here”).

16 Here, the Court finds that what claim 1 is directed to—*organizing and viewing data on a*
 17 *network in a reducible hierarchy*—falls squarely within the realm of ideas that the Federal Circuit
 18 has consistently found to be abstract. “Information as such is an intangible.” *Elec. Power*, 830
 19 F.3d at 1353. Accordingly, the Federal Circuit has repeatedly concluded that claims reciting “data
 20 manipulation steps,” such as “collecting, displaying, and manipulating data,” are directed to
 21 abstract ideas. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed.
 22 Cir. 2017). For example,

23 *in Content Extraction and Transmission LLC v. Wells Fargo Bank, National Ass’n*,
 24 we held the concept of “1) collecting data, 2) recognizing certain data within the
 25 collected data set, and 3) storing that recognized data in a memory” abstract. 776
 26 F.3d 1343, 1347 (Fed. Cir. 2014). In particular, the invention there involved
 27 extracting data from a document, entering the data into appropriate data fields, and
 28 storing the data in memory. *Id.* at 1345. In *Intellectual Ventures I LLC v. Capital*
One Bank (USA), we concluded that customizing information and presenting it to
 users based on particular characteristics is abstract as well. 792 F.3d 1363, 1370
 (Fed. Cir. 2015) (“*Intellectual Ventures I*”). And in *Electric Power Group*, we

1 explained that an invention directed to collection, manipulation, and display of data
was an abstract process. 830 F.3d at 1353–54 (Fed. Cir. 2016).

2 *Id.*

3 The Federal Circuit’s recent decision *Intellectual Ventures I LLC v. Erie Indem. Co.* is
4 particularly instructive. 850 F.3d 1315 (Fed. Cir. 2017). There, the claims related to “methods
5 and apparatuses that use an index to locate desired information in a computer database.” *Id.* at
6 1325. For example, claim 1 recited the steps of “creating the index by defining a plurality of XML
7 tags . . .,” “creating a first metafile . . .,” and “creating the database . . . each record having an
8 XML index component.” *Id.* at 1326. The Federal Circuit found that the claims were directed
9 toward an abstract idea because “[t]his type of activity, i.e., organizing and accessing records
10 through the creation of an index-searchable database, includes longstanding conduct that existed
11 well before the advent of computers and the Internet.” *Id.* at 1327. It also noted that “[w]e have
12 previously held other patent claims ineligible for reciting similar abstract concepts that merely
13 collect, classify, or otherwise filter data.” *Id.* It also rejected the argument that the claims were
14 directed to an improvement in computer technology because “[t]he claims are not focused on how
15 usage of the XML tags alters the database in a way that leads to an improvement in the technology
16 of computer databases, as in *Enfish*. Instead, the claims simply call for XML-specific tags in the
17 index without any further detail.” *Id.* at 1328.

18 Here, the “character as a whole” of claim 1 of the ’547 patent is no less abstract than that
19 of the claims at issue in *Erie Indem. Organizing and viewing data on a network in a reducible*
20 *hierarchy* is, at base, just “collect[ing], classify[ing], [and] filter[ing] data.” *Id.* at 1327. Just as
21 *Erie*’s invention provided an index to help organize and view contents in its database, the
22 invention of claim 1 of the ’547 patent provides a “hierarchical list” that allows the user to view
23 and access the “folders” in the “folder structure” and the “data object[s]” they contain. *Compare*
24 *Erie Indem.*, 850 F.3d at 1326, *with* ’547 patent, col. 14:52–15:15. Thus, Federal Circuit
25 precedent compels the conclusion that claim 1 of the ’547 patent is directed to an abstract idea.

26 Neither the fact that claim 1 of the ’547 patent is directed to activities “on a network” nor
27 the fact that the hierarchy is “reducible” makes it less abstract. First, “[o]rganizing and viewing

1 data” that is “on a network” simply limits the technological environment in which the abstract idea
2 is applied. “An abstract idea does not become nonabstract by limiting the invention to a particular
3 field of use or technological environment, such as the Internet.” *Capital One Bank*, 792 F.3d at
4 1366. Second, the fact that the hierarchy is “reducible” does not change the fact that claim 1 of
5 the ’547 patent is directed to “collect[ing], classify[ing], [and] filter[ing] data.” *Erie Indem.*, 850
6 F.3d at 1327. Thus, the entirety of what claim 1 of the ’547 patent is directed to—*organizing and*
7 *viewing data on a network in a reducible hierarchy*—is an abstract idea.

8 Plaintiff nevertheless argues that claim 1 of the ’547 patent is not directed to an abstract
9 idea because the reducible “hierarchical list” of “folders” constitutes an improvement in computer
10 network technology. Opp’n at 21–25. In particular, Plaintiff argues that it reduces the amount of
11 information about particular sub-folders or files that must be transmitted over the network, which
12 improves efficiency. *Id.* The Court disagrees. Claim 1 does not recite any specific improvement
13 to “folder” or “data object” storage itself, nor does it recite an improvement to “hierarchical lists”
14 as a data structure. *Compare Enfish*, 822 F.3d at 1339 (noting that “the self-referential table
15 recited in the claims on appeal is a specific type of data structure”). Instead, claim 1 simply recites
16 the *use* of a “hierarchical list” to help organize and view the “folder structure.” The focus of the
17 claims, therefore, remains on the high level idea of *organizing and viewing data on a network in a*
18 *reducible hierarchy*. There is no specific technology that is being improved.

19 Accordingly, because the heart of claim 1 of the ’547 patent—*organizing and viewing data*
20 *on a network in a reducible hierarchy*—falls within the realm of “collect[ing], classify[ing], [and]
21 filter[ing] data” that the Federal Circuit has found is abstract, claim 1 of the ’547 patent is directed
22 to an abstract idea.

23 **3. Alice Step Two for Claim 1 of the ’547 Patent—Evaluation of Abstract Claims for**
24 **an Inventive Concept**

25 Having found that claim 1 of the ’547 patent is directed to an abstract idea under step one
26 of *Alice*, the Court proceeds to step two. At step two, the Court must “consider the elements of
27 each claim both individually and ‘as an ordered combination’ to determine whether the additional

1 elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at
2 2355 (quoting *Mayo*, 132 S. Ct. at 1297, 1298). The United States Supreme Court has described
3 this as a “search for an ‘inventive concept’—i.e., an element or combination of elements that is
4 ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon
5 the [ineligible concept] itself.’” *Id.*

6 Here, Defendant argues that claim 1 does not recite an inventive concept because it simply
7 recites generic computer components, used in conventional ways. Mot. at 7–9. Defendant also
8 observes that claim 1 “simply takes the well-known idea of viewing data in a hierarchy—
9 admittedly long practiced on desktop PCs—and applies it to the Internet.” *Id.* at 8.

10 Plaintiff responds that claim 1 of the ’547 patent recites an inventive concept because it
11 recites an “improvement in network technology that allows a user to access a folder located
12 remotely on a network server as if it were located locally on the user’s computer.” Opp’n at 25.
13 According to Plaintiff, this is an improvement because claim 1 allows a reduced amount of
14 information about the folder structure to be communicated at a time, which improves network
15 efficiency. *Id.*

16 In assessing whether a claim recites an inventive concept, the Court, under *Alice*, must
17 consider its elements “both individually and ‘as an ordered combination.’” *Alice*, 134 S. Ct. at
18 2355. The Court addresses each in turn.

19 Considering the elements of claim 1 individually, the Court discerns nothing that supplies
20 an inventive concept. Instead, each of the elements of claim 1 are generic computer components,
21 used in conventional ways. For example, the “memory” stores information, the “program code”
22 provides instructions that are executed, and the “server” executes the program code. ’547 patent,
23 col. 14:54–57. Similarly, the “hierarchical list” is simply that—a generic hierarchical list of
24 information—and the fact that it is reducible or collapsible is a generic feature that is intrinsic to
25 the fact that it is hierarchical. *Id.*, col. 14:57–15:15. The “user interface” is also generic and
26 conventional—it “display[s]” information to the user and the user “navigate[s]” this information.
27 *Id.* There is nothing inventive about any of these features.

1 The specification confirms the generic nature of these elements. Many times, the
 2 specification states that conventional components can be used to make the disclosed embodiments.
 3 For example, the specification teaches that “[t]he system mentioned in this invention is any type of
 4 computing device that can be a desktop computer, laptop computer, various types of servers, PDA,
 5 or cell phone or other devices with communication ability across a communication network.” *Id.*,
 6 col. 4:34–39. In addition, “[t]he operating system (OS) . . . can be any suitable operating system,”
 7 *id.*, col. 4:40–41, “[t]he programming languages . . . used for implementing all software mentioned
 8 in this invention[] could be any suitable languages,” *id.*, col. 4:44–46, “[t]he communication
 9 protocols for web computing in the present invention could be HTTP, SOAP, WAP, or others
 10 without limits,” *id.*, col. 4:61–63, “[t]he web browser could be any existing commercial software
 11 from any vendor,” *id.*, col. 4:64–65, and “[t]he web server software mentioned in this invention
 12 could be a commercial software from any vendor,” *id.*, col. 5:4–5. Thus, read in light of the
 13 specification, the elements of claim 1 are generic computer components. As such, they fail to
 14 recite an inventive concept.

15 Turning to the ordered combination of elements of claim 1, the Court also finds that this
 16 fails to recite an inventive concept. Specifically, nothing in claim 1 is a “non-conventional and
 17 non-generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1350. Instead,
 18 all of the elements are arranged in a conventional and generic way. For example, the “hierarchical
 19 list” is “created in the memory”—a conventional location for it—and it “represent[s] a folder
 20 structure”—something that is itself hierarchical and conventionally lends itself to representation
 21 through a “hierarchical list.” *See id.*, col. 14:57–64. As another example, the “user interface” is
 22 “sen[t]” to the “end-user device”—a conventional destination for it—and “displayed” to the
 23 user—a conventional use for it. *See id.*, col. 14:66–15:3. The fact that—as Plaintiff argues,
 24 Opp’n at 25—the “hierarchical list” is reducible and, through that, allegedly improves network
 25 efficiency, also does not provide an inventive concept. The reducibility of the “hierarchical list” is
 26 something that flows naturally from its hierarchical structure—there is nothing unconventional
 27 about choosing to view a hierarchy of information at only a particular level of granularity.

1 Moreover, the claims say nothing about network efficiency, let alone recite what particular steps
 2 are taken to effect this. The Federal Circuit has declined to find an inventive concept in similar
 3 cases where, even if a claim purports to solve a particular technological problem, it does not
 4 specifically recite detail for how it is accomplished. *See Capital One Fin.*, 850 F.3d at 1342 (no
 5 inventive concept where “[n]othing in the claims indicate what steps are undertaken to overcome
 6 the stated incompatibility problems”). Thus, the ordered combination of elements in claim 1 does
 7 not provide an inventive concept.

8 In sum, neither the individual elements of claim 1 of the ’547 patent nor their ordered
 9 combination recite an inventive concept. Accordingly, claim 1 fails to recite patent-eligible
 10 subject matter under § 101. Because, as discussed above, claim 1 is representative, this conclusion
 11 applies equally to the remaining claims of the ’547 patent.

12 **B. The ’473 Patent**

13 The Court now turns to the ’473 patent and determined whether its claims recite patent-
 14 ineligible subject matter under § 101.

15 **1. Scope of Analysis and Representative Claim**

16 As with the ’547 patent, the Court first clarifies the scope of the claims to be assessed.
 17 Plaintiff has asserted that Defendant infringes at least claim 1 of the ’473 patent, Compl. Ex. J, but
 18 has not specifically identified whether it asserts any other claims of the ’473 patent. Nevertheless,
 19 this does not impede the Court’s analysis, as claim 1 is representative of the remaining claims in
 20 the ’473 patent. *See Content Extraction*, 776 F.3d at 1348 (a district court need not expressly
 21 address each asserted claim where particular claims are representative because all the claims are
 22 “substantially similar and linked to the same abstract idea”) (quotation marks omitted). The ’473
 23 patent contains only five claims, and claims 2–5 are all dependent claims which introduce minor
 24 limitations which do not alter the character of the Court’s patent eligibility analysis.⁴ Thus,

25
 26 ⁴ For example, claims 2–4 simply make the fact that multiple tasks are submitted to the server
 27 more explicit. ’473 patent, col. 10:5–19. Claim 5 adds functionality where the status or result of a
 28 submitted task is displayed to the user. *Id.*, col. 10:20–24. None of these features substantially
 alter the substance of claim 1.

1 although the Court will focus its analysis on claim 1 of the '473 patent, its analysis herein is
2 equally applicable to the remaining claims.

3 **2. *Alice* Step One for Claim 1 of the '473 Patent—Whether the Claim is Directed to**
4 **an Abstract Idea**

5 Step one of the *Alice* framework directs the Court to assess “whether the claims at issue are
6 directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. On this point, Defendant contends that
7 claim 1 is directed to “concurrent web based multi-tasking.” Mot. 9. Defendant argues that this is
8 an abstract idea because this is simply a computerized version of multi-tasking, which is an age-
9 old concept that has existed long before computers. *Id.* at 9–10.

10 Plaintiff responds that claim 1 is not directed to an abstract idea because it is instead
11 directed to a specific improvement in concurrent processing technology. Opp’n at 17–20. In
12 particular, Plaintiff points to “storing information about the first request” and “lock protection” as
13 “key limitations” which distinguish the '473 patent from prior art and enable concurrent
14 processing on a web server. *Id.*

15 **a. Claim 1 of the '473 Patent—“Directed to” Inquiry**

16 The Court begins by examining claim 1 of the '473 patent in its entirety to understand
17 what its “character as a whole” is “directed to.” *Elec. Power*, 830 F.3d at 1353 (describing “the
18 first-stage inquiry as looking at the ‘focus’ of the claims, their ‘character as a whole . . .”).

19 Here, the Court finds—as Defendant contends—that claim 1 of the '473 patent is directed
20 to *concurrent web-based multi-tasking*. Claim 1 recites a “server” which is configured to perform
21 four tasks: (1) “display[ing] . . . information about resources;” (2) “receiving a first request[] for
22 access [to] a first resource;” (3) “storing information about the first request and invoking lock
23 protection to protect the storing of the first request;” and (4) “processing the first request . . . in the
24 background . . . without blocking in the web browser . . . to allow the first user [to] submit[] a
25 second request for access to [a] second resource without waiting for the completing of the first
26 request.” '473 patent, col. 9:9–10:4. The substantive weight of the claim rests with the final two
27 tasks; the first two tasks, by contrast, are preparatory functions which enable the final two tasks.

1 *See id.* Thus, read as a whole, the focus of claim 1 rests with what the final two tasks accomplish:
2 allowing the user to submit multiple requests for resources from a web browser that can be
3 processed concurrently. *See id.*, col. 9:18–10:4. Put simply, *concurrent web-based multi-tasking*.

4 **b. Claim 1 of the '473 Patent—Abstract Idea Analysis**

5 Having determined the “character as a whole” of claim 1 of the '473 patent, the question
6 becomes whether this is an abstract idea. *Enfish*, 822 F.3d at 1335 (directing the Court to “appl[y]
7 a stage-one filter to claims, considered in light of the specification, based on whether ‘their
8 character as a whole is directed to excluded subject matter.’”).

9 As discussed above, one guidepost that courts will consult at step one is whether the claims
10 have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . . practice
11 long prevalent in our system” *Alice*, 134 S. Ct. at 2356. For example, in *Symantec Corp.*, the
12 Federal Circuit concluded that claims relating to a method of filtering emails were abstract
13 because “it was long-prevalent practice for people receiving paper mail to look at an envelope and
14 discard certain letters, without opening them, from sources from which they did not wish to
15 receive mail based on characteristics of the mail.” 838 F.3d at 1314. Accordingly, the court
16 concluded, “[t]he patent merely applies a well-known idea using generic computers ‘to the
17 particular technological environment of the Internet.’” *Id.* (quoting *DDR*, 773 F.3d at 1259).

18 Courts have reached similar conclusions in substantive areas that are similar to the claims
19 of the '473 patent. For example, in *Kinglite Holdings Inc. v. Micro-Star Int'l Co.*, the court
20 assessed the patentability of claims relating to multitasking in a basic input and output system
21 (“BIOS”) in a processor, which involved “performing a first task” when there were pre-scheduled
22 interrupt signals and “performing a second task” between the interrupt signals. No.
23 CV1403009JVSPJWX, 2016 WL 4205356, at *3 (C.D. Cal. May 26, 2016). It concluded that the
24 claims were directed to an abstract idea because they “discuss[] the basic process of doing two
25 things nearly simultaneously.” *Id.* at *4.

26 Claim 1 of the '473 patent presents an analogous situation. As discussed above, claim 1 is
27 directed to *concurrent web-based multi-tasking*. Multi-tasking is an age-old activity that existed

1 well before the advent of computers, and many analogies can be drawn to the brick-and-mortar
2 world. For example, a restaurant can process food orders in a concurrent fashion: if a first
3 customer orders a steak and a second customer orders a salad, the restaurant can prepare the
4 second customer’s salad while the first customer’s steak is grilling. The restaurant does not have
5 to wait until the first customer’s steak is finished before starting work on the second customer’s
6 salad. Claim 1 of the ’473 focuses on this same idea: the user can submit a first request for a first
7 resource and a second request for a second resource, and the server does not have to wait until the
8 first request completes before processing the second request.

9 The only difference between the focus of claim 1 of the ’473 patent—*concurrent web-*
10 *based multi-tasking*—and the restaurant example is the phrase “web-based.” However, this
11 simply limits an otherwise abstract idea to a particular technological environment. “An abstract
12 idea does not become nonabstract by limiting the invention to a particular field of use or
13 technological environment, such as the Internet.” *Capital One Bank*, 792 F.3d at 1366. Thus, the
14 fact that the concurrent multi-tasking of claim 1 is “web-based” does not make it non-abstract.
15 Accordingly, the focus of claim 1 of the ’473 patent—*concurrent web-based multi-tasking*—is an
16 abstract idea.

17 TS Patents nevertheless argues that claim 1 of the ’473 patent is not directed to an abstract
18 idea because it is instead directed to an improvement in concurrent processing technology. Opp’n
19 at 18. It points to “storing information about the first request” and “lock protection” as “key”
20 aspects of the invention and argues that these aspects, taken together, constitute an inventive
21 algorithm for web-based multitasking. *Id.* The Court disagrees. In *Enfish*, the Federal Circuit
22 found that the claims at issue were directed to a non-abstract improvement in computer technology
23 because they were “directed to a specific implementation of a solution to a problem in the software
24 arts.” *Enfish*, 838 F.3d at 1339. The same is not true here. Claim 1 does not recite a specific
25 algorithm for how “storing information about the first request” is accomplished—only that this
26 happens. Similarly, claim 1 only recites “invoking a lock protection to protect the storing of the
27 first request”—it does not claim a specific type of lock protection or inventive algorithm for

1 implementing this. As the '473 patent itself discloses, lock protection can be “conventional” and
2 “conventional lock mechanisms have [been] used by most software developer[s] crossing the
3 software industry.”⁵ '473 patent, col. 3:20–23. As such, the focus of claim 1 remains on
4 *concurrent web-based multi-tasking*, accomplished through a non-specific “storing information
5 about the first request” and generic “lock protection.” Accordingly, it is not directed to an
6 improvement in concurrent processing technology.

7 In sum, because it covers a “fundamental . . . practice long prevalent in our system . . . ,”
8 *Alice*, 134 S. Ct. at 2356, claim 1 of the '473 patent is directed to an abstract idea.

9 **3. *Alice* Step Two for Claim 1 of the '473 Patent—Evaluation of Abstract Claims for
10 an Inventive Concept**

11 Having found that claim 1 of the '473 patent is directed to an abstract idea under step one
12 of *Alice*, the Court proceeds to step two. As discussed above, at step two, the Court must
13 “consider the elements of each claim both individually and ‘as an ordered combination’” to
14 “search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient
15 to ensure that the patent in practice amounts to significantly more than a patent upon the
16 [ineligible concept] itself.”” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297, 1298).

17 Here, Defendant argues that claim 1 does not recite an inventive concept because it only
18 recites generic computer components and basic computer functionality. Mot. at 10–11. In
19 particular, Defendant argues that the claimed “server,” “end-user device,” “processor,” and
20 “network interface” are generic, and that the claimed actions of displaying resources, requesting
21 access to them, and processing requests are basic computer functions. *Id.*

22 _____
23 ⁵ The Court notes that the specification also discloses that there are also “non-conventional lock
24 mechanisms created in this invention.” *Id.*, col. 3:22–23. These “non-conventional lock
25 mechanisms” differ from “conventional” lock mechanisms in that the “non-conventional lock
26 mechanisms . . . can be acquired by one thread and may be released by the same thread or by
27 another thread,” whereas the “conventional” lock mechanisms only “can be acquired and released
28 by the same thread.” *Id.*, col. 3:20–21, col. 3:23–25. However, claim 1 is not limited to these
non-conventional lock mechanisms. The claim language is silent as to whether the recited “lock
protection” is conventional or non-conventional. *Id.*, col. 9:9–10:4. Moreover, the specification
states that “[t]he lock described in this invention may or may not be a conventional one.” *Id.*, col.
3:22–23. Thus, the Court must read “lock protection” as generically invoking lock protection,
which could include both conventional and non-conventional lock mechanisms.

1 Plaintiff disagrees, arguing that “the algorithms of invoking and deleting the process lock
2 by a network thread (as opposed to a local thread)” provide an inventive concept. Opp’n at 20.
3 Plaintiff also argues that claim 1’s ordered combination of elements provides an inventive concept
4 because it provides something beyond mere multitasking which “solves the technical glitches of
5 hanging and blocking when one network thread is running and a second thread is being started
6 concurrently with the first thread.” *Id.*

7 In assessing whether a claim recites an inventive concept, the Court, under *Alice*, must
8 consider its elements “both individually and ‘as an ordered combination.’” *Alice*, 134 S. Ct. at
9 2355. The Court addresses each in turn.

10 Turning first to the individual claim elements, the Court finds that none of the claim
11 elements provide an inventive concept. Claim 1 only recites generic computer components, such
12 as a “server,” “end-user device,” “processor,” “network interface,” and “web browser.” *Id.*, col.
13 9:9–10:4. Nothing in claim 1 suggests that these elements are anything more than generic
14 computer components, and the specification confirms their generic nature. For example, the
15 specification discloses that the “server” “could be a web server or any kind of computing system
16 with web server software.” *Id.*, col. 3:52–53. It also states that the “web browser . . . may be
17 commercially available software from any vendor or a proprietary software.” *Id.*, col. 3:41–43. It
18 also lists a wide range of devices—a “desktop, laptop, server, PDA, or cell phone”—as exemplary
19 “end-user device[s].” *Id.*, col. 3:3.

20 In addition to only reciting generic computer components, each of the individual functions
21 recited in claim 1 is nothing more than conventional computer activity. For example, in the first
22 limitation, the “web browser” “display[s] information.” *Id.*, col. 9:12–13. In the second
23 limitation, the “server” “receiv[es] a . . . request.” *Id.*, col. 9:14–17. In the third limitation, the
24 “server” “stor[es] information.” *Id.*, col. 9:18–19. It also “invok[es] lock protection,” which, as
25 discussed above, the specification admits can be “conventional.” *Id.*, col. 3:20–23. In the fourth
26 limitation, the “server” “process[es] the . . . request” and “delet[es] . . . stored information.” *Id.*,
27 col. 9:20–10:4. The other details of the fourth limitation relate to what is “process[ed]” and

1 “delet[ed],” which does not change the generic nature of these functions. *See id.* Thus, because
2 the elements of claim 1 are generic computer components and conventional computer activity,
3 they do not provide an inventive concept.

4 Turning to the ordered combination of claim elements in claim 1, the Court also finds no
5 inventive concept. Unlike the claims at issue in *BASCOM*, there is no “non-conventional and non-
6 generic arrangement of known, conventional pieces.” 827 F.3d at 1350. Instead, claim 1 only
7 recites generic computer components, interacting in generic and conventional ways. For example,
8 the “server” “caus[es]” the “web browser” to display information. *Id.*, col. 9:13–14. In addition,
9 the “server” “receiv[es] . . . request[s]” from the “end-user device.” *Id.*, col. 9:14–17. Nothing
10 about this is anything other than conventional interactions that a server would have with a web
11 browser or with an end-user device.

12 Plaintiff nevertheless contends that claim 1’s ordered combination of elements provides an
13 inventive concept because it provides something beyond mere multitasking which “solves the
14 technical glitches of hanging and blocking” Opp’n at 20. This is unpersuasive. The Federal
15 Circuit has made clear that “there is a critical difference between patenting a particular concrete
16 solution to a problem and attempting to patent the abstract idea of a solution to the problem in
17 general.” *Elec. Power*, 830 F.3d at 1356 (citation and internal quotation marks omitted). Claim 1
18 falls into this latter category. It recites no “particular concrete solution;” instead, it merely recites
19 the abstract idea of *concurrent web-based multi-tasking* generally. For this reason, the Federal
20 Circuit’s decision in *DDR* is distinguishable. As discussed above, in *DDR*, the Federal Circuit
21 found an inventive concept in a “claimed solution [that was] necessarily rooted in computer
22 technology in order to overcome a problem specifically arising in the realm of computer
23 networks.” *DDR*, 773 F.3d at 1257. Here, because it only recites an abstract idea and not a
24 particular concrete solution, claim 1 is not “necessarily rooted in computer technology.” *DDR*,
25 773 F.3d at 1257. The Federal Circuit has found *DDR* distinguishable in such cases. *See, e.g.*,
26 *Elec. Power*, 830 F.3d at 1355 (“The claims at issue here do not require an arguably inventive
27 device or technique for displaying information, unlike the claims at issue in *DDR*”). Thus,
28

1 claim 1 does not recite an inventive concept under the rationale of *DDR*.

2 In sum, neither the individual elements of claim 1 of the '473 patent nor their ordered
3 combination recite an inventive concept. Accordingly, claim 1 fails to recite patent-eligible
4 subject matter under § 101. Because, as discussed above, claim 1 is representative, this conclusion
5 applies equally to the remaining claims of the '473 patent.

6 **C. The '442 Patent**

7 The Court now turns to the '442 patent and determines whether its claims recite patent-
8 ineligible subject matter under § 101.

9 **1. Scope of Analysis and Representative Claim**

10 The Court begins by clarifying the scope of the claims to be assessed. Plaintiff has
11 asserted that Defendant infringes at least claim 9 of the '442 patent, Compl. Ex. G, but has not
12 specifically identified whether it asserts any other claims of the '442 patent. The Court
13 nevertheless finds that claim 9 is sufficiently representative of the remaining claims of the '442
14 patent, such that it need not analyze other claims individually. *See Content Extraction*, 776 F.3d
15 at 1348 (a district court need not expressly address each asserted claim where particular claims are
16 representative because all the claims are “substantially similar and linked to the same abstract
17 idea”) (quotation marks omitted). Claim 9 is substantially similar to the other independent claims
18 in the '442 patent, and the dependent claims only introduce minor limitations which would not
19 alter the substance of the Court’s patent eligibility analysis.⁶ Thus, although the Court will focus
20 its analysis on claim 9 of the '442 patent, its analysis herein is equally applicable to the remaining
21 claims.

22
23 ⁶ Specifically, independent claims 1 and 17 also recite the basic steps of: (1) “display[ing] . . .
24 metadata of files and folders . . .;” (2) “allow[ing] a first user [to] select[] . . . from the metadata
25 displayed;” (3) “stor[ing] the metadata, but not the content . . .;” (4) “display[ing] to a second user
26 the stored metadata . . .;” and (5) “allow[ing] the second user access to the content . . .” *See* '442
27 patent, col. 22:2–21, col. 23:4–27, col. 24:21–41. Dependent claims 2–8, 10–16, and 18–20
28 introduce additional minor limitations to these basic steps. For example, claims 2, 3, 10, 11, and
15 provide more detail on what constitutes “metadata” and where it is stored. *See id.*, col. 22:2–
29, col. 23:28–37, col. 24:10–13. As another example, claims 4–6 and 12–14 add features where
the first and second user can exchange messages, which is ancillary to the preview-based file and
folder sharing functionality. *See id.*, col. 22:30–56, col. 23:38–24:4.

1 **2. *Alice* Step One for Claim 9 of the '442 Patent—Whether the Claim is Directed to**
2 **an Abstract Idea**

3 Step one of the *Alice* framework directs the Court to assess “whether the claims at issue are
4 directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. On this point, Defendant contends that
5 claim 9 is directed to “providing a preview of a file or folder and then allowing the person to
6 access the file or folder.” Mot. at 13. Defendant argues that this is an abstract idea because
7 previewing is a decades-old concept which exists in the physical world. *Id.* at 13–14. Defendant
8 also argues that nothing about claim 9 improves computer or internet technology itself. *Id.* at 14.

9 Plaintiff responds that claim 9 is not directed to an abstract idea because it is instead
10 directed to the dynamic relocation of files and folders over a network. Opp’n at 13–17. Plaintiff
11 argues that this constitutes a specific improvement to “the computer technology of sharing
12 information over a network” because it enables fast and easy file exchange between users. *Id.*

13 **a. Claim 9 of the '442 Patent—“Directed to” Inquiry**

14 The Court begins by examining claim 9 of the '442 patent in its entirety to understand
15 what its “character as a whole” is “directed to.” *Elec. Power*, 830 F.3d at 1353 (describing “the
16 first-stage inquiry as looking at the ‘focus’ of the claims, their ‘character as a whole . . .”).

17 Here, the Court finds that claim 9 is directed to *preview-based file or folder sharing*.
18 Claim 9 recites five basic steps: (1) “display . . . metadata of files and folders . . . on a first end-
19 user device;” (2) “allow a first user [to] select[] one selected file or one selected folder from the
20 metadata displayed;” (3) “store the metadata, but not the content, of the selected file or the
21 selected folder;” (4) “display to a second user the stored metadata of the selected file or the
22 selected folder;” and (5) “allow the second user access to the content of the selected file or
23 selected folder through the stored metadata.” *See* '442 patent, col. 23:4–27. Put simply, the first
24 user shares a file or folder with a second user by sending its metadata. *See id.* Although the word
25 “metadata” does not appear in the specification, dependent claim 15 recites that “metadata . . . at
26 least comprises name, path, owner, or timestamp.” *Id.*, col. 24:10–12. These pieces of
27 information give the second user enough information about the file or folder such that he has some
28 idea of what the file or folder is. In this sense, the transmitted metadata provides a preview. Thus,

1 taken as a whole, the focus of claim 9 distills to *preview-based file or folder sharing*.

2 **b. Claim 9 of the '442 Patent—Abstract Idea Analysis**

3 Having determined the “character as a whole” of claim 9 of the '442 patent, the question
4 becomes whether this is an abstract idea. *Enfish*, 822 F.3d at 1335 (directing the Court to “appl[y]
5 a stage-one filter to claims, considered in light of the specification, based on whether ‘their
6 character as a whole is directed to excluded subject matter.’”).

7 As discussed above, one guidepost that courts will consult at step one is whether the claims
8 have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . . practice
9 long prevalent in our system” *Alice*, 134 S. Ct. at 2356; *see, e.g., Symantec Corp.*, 838 F.3d
10 at 1317 (finding an email processing software program to be abstract through comparison to a
11 “brick and mortar” post office). This guidepost resolves the step one inquiry here. *Preview-based*
12 *file or folder sharing* is simply a computerized version of a manual process of sharing information
13 that has existed for years. Consider, for example, two researchers collaborating on a paper. One
14 researcher would like to share some of the books on which he has been relying with the second
15 researcher. That first researcher could physically go to the library, pull the books he would like to
16 share, and give them to the second researcher. Or, the first researcher could simply give the
17 second researcher a list of book titles, and let the second researcher go to the library and access
18 those books. Claim 9, in essence, is this second option. Just as the first researcher supplies the
19 second researcher with titles of the books he wishes to share, the “first user” in claim 9 provides
20 the “second user” with metadata for the files or folders he wishes to share. Thus, because it has a
21 direct analog to the brick-and-mortar world, the focus of claim 9—*preview-based file or folder*
22 *sharing*—is an abstract idea.

23 This conclusion is bolstered by decisions from the Federal Circuit and other district courts
24 which have also found that claims relating to information sharing and access are directed to
25 abstract ideas. For example, in *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, the Federal
26 Circuit concluded that “the concept of delivering user-selected media content to portable devices
27 is an abstract idea.” 838 F.3d 1266, 1269 (Fed. Cir. 2016), *cert. denied*, 137 S. Ct. 1596, 197 L.

28

1 Ed. 2d 708 (2017). Similarly, in *Pres. Wellness Techs. LLC v. Allscripts Healthcare Sols.*, Judge
 2 Bryson, sitting by designation, found that “[t]he ‘concept of record access and management’ is an
 3 abstract idea, even as applied in the particular context of medical records.” No. 2:15-CV-1559-
 4 WCB, 2016 WL 2742379, at *7 (E.D. Tex. May 10, 2016), *aff’d sub nom. Pres. Wellness Techs.*
 5 *LLC v. Allscripts Healthcare Sols. Inc.*, 684 F. App’x 970 (Fed. Cir. 2017). As another example,
 6 in *Am. Needle, Inc. v. Zazzle Inc.*, the district court found that claims relating to “promoting sales
 7 by providing a visual aide to purchasing over the internet” were directed to an abstract idea. No.
 8 15-CV-3971, 2016 WL 232440, at *3 (N.D. Ill. Jan. 19, 2016), *aff’d*, 670 F. App’x 717 (Fed. Cir.
 9 2016). The Court’s conclusion here with respect to claim 9 is consistent with the decisions in
 10 these cases. Thus, for this reason as well, claim 9 is directed to an abstract idea.

11 Plaintiff nevertheless argues that claim 9 is directed to a specific improvement in computer
 12 technology—not an abstract idea—because it enables the fast and easy exchange of files between
 13 users. Opp’n at 13–17. This is unpersuasive. Simply because a claimed invention offers benefits
 14 within a particular technological environment does not mean that it improves technology itself.
 15 Critically, there are no computer or networking technologies, such as algorithms, data structures,
 16 or hardware components, which claim 9 specifically improves. *See Enfish*, 822 F.3d at 1336
 17 (claims directed to a specific type of self-referential table in a computer database were not abstract
 18 because they focused “on the specific asserted improvement in computer capabilities (i.e., the self-
 19 referential table for a computer database)”). Instead, claim 9 merely contemplates using a
 20 computer as a tool for carrying out the abstract idea of *preview-based file or folder sharing*. This
 21 is not sufficient.

22 In sum, because it simply recites a computerized version of a brick-and-mortar process for
 23 sharing information, the focus of claim 9 of the ’442 patent—*preview-based file or folder*
 24 *sharing*—is an abstract idea.

25 **3. Alice Step Two for Claim 9 of the ’442 Patent—Evaluation of Abstract Claims for**
 26 **an Inventive Concept**

27 Having found that claim 9 of the ’442 patent is directed to an abstract idea under step one

1 of *Alice*, the Court proceeds to step two. As discussed above, at step two, the Court must
2 “consider the elements of each claim both individually and ‘as an ordered combination’” to
3 “search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient
4 to ensure that the patent in practice amounts to significantly more than a patent upon the
5 [ineligible concept] itself.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297, 1298).

6 Here, Defendant contends that claim 9 does not recite an inventive concept because it only
7 claims generic computer components, employed in their customary and ordinary way. Mot. at 14–
8 16. Defendant also points out that the Federal Circuit has repeatedly confirmed the unpatentability
9 of claims that condition access to content, which further weighs against the eligibility of claim 9.
10 *Id.* at 15–16.

11 In response, Plaintiff acknowledges that in claim 9 “each individual component . . . may be
12 established computer technology.” Opp’n at 17. However, Plaintiff argues that at least the
13 ordered combination of elements in claim 9 recites an inventive concept because it provides
14 something beyond file sharing which “provide[s] the useful technology of fast and easy posting
15 and un-posting over a network by transmitting and displaying only the metadata of the file or
16 folder.” *Id.*

17 Ordinarily, in assessing whether a claim recites an inventive concept, the Court, under
18 *Alice*, must consider its elements “both individually and ‘as an ordered combination.’” *Alice*, 134
19 S. Ct. at 2355. Here, however, because Plaintiff has not identified any individual elements which
20 it contends supply an inventive concept, the Court need only assess the ordered combination.
21 *Shakur v. Schriro*, 514 F.3d 878, 892 (9th Cir. 2008) (litigants waive arguments by failing to raise
22 them in an opposition to a motion to dismiss).

23 Assessing the ordered combination of the elements of claim 9, the Court finds that they fail
24 to recite an inventive concept. Specifically, nothing in claim 9 is a “non-conventional and non-
25 generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1350. Instead, claim
26 9 only recites generic components that are arranged in a conventional way. For example, the first
27 and second “user interface[s]” are displayed on the first and second “end-user device[s]” and they

1 conventionally “display” information to a user. ’442 patent, col. 23:10–16, col. 23:21–27. In
 2 addition, the “server” performs its conventional role of serving back-end data—the “metadata of
 3 files and folders”—to the “end-user device[s].” *Id.*, col. 23:10–16. There is also nothing “non-
 4 conventional” or “non-generic” about “stor[ing] the metadata information, but not the content, of
 5 the selected file or the selected folder” on the second “end-user device.” *Id.*, col. 23:16–20.
 6 Instead, it makes sense that the “end-user device”—a smaller, less powerful device—would store
 7 less information than the “server.” Accordingly, the ordered combination of elements in claim 9
 8 fails to provide an inventive concept.

9 Plaintiff’s arguments to the contrary are unpersuasive. Plaintiff asserts that claim 9
 10 “provide[s] the useful technology of fast and easy posting and un-posting over a network by
 11 transmitting and displaying only the metadata of the file or folder.” Opp’n at 17. However, this
 12 assertion is belied by claim 9 itself. As discussed above, claim 9 does not recite a specific
 13 technology or concrete technical solution; instead, it merely recites the abstract idea of *preview-*
 14 *based file or folder sharing*, implemented with generic computer technology. Thus, it is not the
 15 case that claim 9 “provide[s] . . . useful technology” cognizable by § 101. Opp’n at 17. “[T]here
 16 is a critical difference between patenting a particular concrete solution to a problem and
 17 attempting to patent the abstract idea of a solution to the problem in general.” *Elec. Power*, 830
 18 F.3d at 1356 (citation and internal quotation marks omitted). Claim 9 is the latter.

19 For this same reason, to the extent that Plaintiff is attempting to analogize claim 9 to the
 20 Federal Circuit’s decision in *DDR*, *DDR* is distinguishable. As discussed above with respect to
 21 the ’473 patent, *DDR* requires a solution “necessarily rooted in computer technology.” *DDR*, 773
 22 F.3d at 1257. Claims that do not “require an arguably inventive device or technique for displaying
 23 information” fail to meet this bar. *Elec. Power*, 830 F.3d at 1355. Thus, because claim 9 does not
 24 recite a specific technology or concrete technical solution, it does not recite an inventive concept
 25 under the rationale of *DDR*.

26 In sum, nothing in claim 9 of the ’442 patent recites an inventive concept. Accordingly,
 27 claim 9 fails to recite patent-eligible subject matter under § 101. Because, as discussed above,
 28

1 claim 9 is representative, this conclusion applies equally to the remaining claims of the '442
2 patent.

3 **D. The '891 Patent**

4 The Court now turns to the '891 patent and determines whether its claims recite patent-
5 ineligible subject matter under § 101.

6 **1. Scope of Analysis and Representative Claim**

7 Before turning to the merits of the parties' eligibility arguments, the Court clarifies the
8 scope of the claims to be assessed. Plaintiff has asserted that Defendant infringes at least claim 1
9 of the '891 patent, Compl. Ex. F, but has not specifically identified whether it asserts any other
10 claims of the '891 patent. Nevertheless, this does not impede the Court's analysis, as claim 1 is
11 representative of the remaining claims in the '891 patent. *See Content Extraction*, 776 F.3d at
12 1348 (a district court need not expressly address each asserted claim where particular claims are
13 representative because all the claims are "substantially similar and linked to the same abstract
14 idea") (quotation marks omitted). The '891 patent contains only five claims, and claims 2–5 are
15 all dependent claims which introduce minor limitations which do not alter the Court's patent
16 eligibility analysis.⁷ Thus, although the Court will focus its analysis on claim 1 of the '891 patent,
17 its analysis herein is equally applicable to the remaining claims.

18 **2. Alice Step One for Claim 1 of the '891 Patent—Whether the Claim is Directed to
19 an Abstract Idea**

20 Step one of the *Alice* framework directs the Court to assess "whether the claims at issue are
21 directed to [an abstract idea]." *Alice*, 134 S. Ct. at 2355. On this point, Defendant contends that
22 claim 1 is directed to "sharing and un-sharing access to a file or folder." Mot. at 17. Defendant
23 argues that this is an abstract idea because sharing is a "fundamental practice" long performed by
24 humans. *Id.* at 17–18. Defendant also argues that nothing about claim 1 improves computer or

25
26 ⁷ For example, claims 2 and 3 add functionality where the first and second user can exchange
27 messages. '891 patent, col. 29:6–30:9. Claim 4 clarifies that the user interface appears on a web
28 browser. *Id.*, col. 30:10–11. Claim 5 adds that the first and second user are members of a "user
group." *Id.*, col. 30:12–16. None of these features substantially alter the substance of claim 1.

1 internet technology itself, as claim 1 is drafted primarily in functional language without any
2 specific detail as to how the functions are performed. *Id.* at 18–19.

3 Plaintiff responds that claim 1 is not directed to an abstract idea but instead “claims
4 specific improvements to the technology of sharing a file or folder over the Internet.” Opp’n at 7.
5 In particular, Plaintiff argues that claim 1 is directed to a specific solution for sharing a file or
6 folder, where a user can dynamically grant or revoke access to a file or folder and where only the
7 metadata—not the entire contents—of the file or folder need to be transmitted. *Id.* at 7–9.
8 Plaintiff also argues that claim 1 is distinguishable from *Alice*, 134 S. Ct. at 2347, and *Twilio, Inc.*
9 *v. Telesign Corp.*, No. 16-CV-06925-LHK, 2017 WL 1374759 (N.D. Cal. Apr. 17, 2017), because
10 claim 1 is directed to an improvement in computer technology, not a business method, and
11 because claim 1 does not preempt the entire field of information sharing. *Id.* at 9–11.

12 **a. Claim 1 of the ’891 Patent—“Directed to” Inquiry**

13 The Court begins by examining claim 1 of the ’891 patent in its entirety to understand
14 what its “character as a whole” is “directed to.” *Elec. Power*, 830 F.3d at 1353 (describing “the
15 first-stage inquiry as looking at the ‘focus’ of the claims, their ‘character as a whole . . .”).

16 Here, the Court finds that claim 1 is directed to *dynamically sharing and un-sharing a file*
17 *or folder*. This follows from the language of the claim. Claim 1 begins by reciting a relatively
18 generic user interface, which contains a “private section” with files or folders that are available to
19 share and a “common section” with files or folders that are shared with the user. ’891 patent, col.
20 28:45–51. It then recites two operations that can be performed with this user interface:
21 (1) “shar[ing] a file or folder” and (2) “stop[ping] sharing of a file or folder.” *Id.*, col. 28:52–29:5.
22 “[S]har[ing] a file or folder” includes “unlocking a protection mechanism of the file or folder” and
23 “storing information about the file or folder . . . in a common work place.” *Id.*, col. 28:52–64.
24 Correspondingly, “stop[ping] sharing of a file or folder” includes “locking the protection
25 mechanism” and “deleting information about the file or folder.” *Id.*, col. 28:65–29:5. Assessed as
26 a whole, the substantive weight of the claim rests with the two operations of “shar[ing]” and
27 “stop[ping] sharing;” the recited user interface simply provides the medium through which these

1 operations are carried out. Thus, claim 1 is directed to *dynamically sharing and un-sharing a file*
2 *or folder.*

3 **b. Claim 1 of the '891 Patent—Abstract Idea Analysis**

4 Having determined the “character as a whole” of claim 1 of the '891 patent, the question
5 becomes whether this is an abstract idea. *Enfish*, 822 F.3d at 1335 (directing the Court to “appl[y]
6 a stage-one filter to claims, considered in light of the specification, based on whether ‘their
7 character as a whole is directed to excluded subject matter.’”).

8 As discussed above, one guidepost that courts will consult at step one is whether the claims
9 have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . . practice
10 long prevalent in our system” *Alice*, 134 S. Ct. at 2356; *see, e.g., Symantec Corp.*, 838 F.3d
11 at 1317 (finding an email processing software program to be abstract through comparison to a
12 “brick and mortar” post office). This guidepost resolves the step one question here. Sharing and
13 unsharing information is a fundamental practice, which humans long performed before the age of
14 computers. Consider, for example, a school library. From time to time, a teacher may wish to
15 make a particular book from his private collection available for students to view. That teacher can
16 make that book available in the school library, where all the students can access the book. Then,
17 when the teacher decides he would no longer like to share the book, he can retrieve the book from
18 the library and place it back in his private collection. Claim 1 is nothing more than a
19 computerized version of this. When the “first user” would like to share a particular file or folder,
20 claim 1 initiates a series of actions to share that file or folder, including “storing information about
21 the file or folder . . . in a common work place accessible to both the first user and the second user”
22 and “unlocking a protection mechanism of the file or folder to allow access to the second user.”
23 '891 patent, col. 28:52–64. Then, when the “first user” decides he would no longer like to share
24 the file or folder, this process is reversed, including “deleting information about the file or folder
25 that has been stored in the common work place” and “locking the protection mechanism to rescind
26 access to the second user.” *Id.*, col. 28:65–29:5. Thus, because it is directed to fundamental
27 human activity that exists in the brick-and-mortar world, claim 1 is directed to an abstract idea.

1 This conclusion is consistent with decisions reached by other courts. As discussed above
 2 with respect to the '442 patent, both the Federal Circuit and other district courts have found claims
 3 relating to information sharing and access are directed to abstract ideas. *See, e.g., Amazon.com*,
 4 838 F.3d at 1269 (“[T]he concept of delivering user-selected media content to portable devices is
 5 an abstract idea.”); *Pres. Wellness Techs.*, No. 2:15-CV-1559-WCB, 2016 WL 2742379, at *7
 6 (“The ‘concept of record access and management’ is an abstract idea”); *Am. Needle*, No. 15-
 7 CV-3971, 2016 WL 232440, at *3 (claims relating to “promoting sales by providing a visual aide
 8 to purchasing over the internet” were directed to an abstract idea); *VideoShare, LLC v. Google*,
 9 *Inc.*, No. 13-CV-990 (GMS), 2016 WL 4137524, at *8 (D. Del. Aug. 2, 2016), *aff’d*, No. 2016-
 10 2438, 2017 WL 3498635 (Fed. Cir. Aug. 16, 2017) (claims directed to “the abstract idea of
 11 preparing a video in streaming video format for sharing over a computer network”).

12 Plaintiff nevertheless contends that claim 1 is not directed to an abstract idea because it
 13 instead recites a specific improvement in computer technology. The Court disagrees. Claim 1
 14 does not recite any particular mechanism for sharing or un-sharing folders or files. Instead, it
 15 simply claims high-level functions such as “storing information” and “locking a protection
 16 mechanism.” *See* '891 patent, col. 28:45–29:5. “At that level of generality, the claims do no more
 17 than describe a desired function or outcome, without providing any limiting detail that confines
 18 the claim to a particular solution to an identified problem.” *Amazon.com*, 838 F.3d at 1269. As
 19 such, they recite only the abstract idea of *dynamically sharing and un-sharing a file or folder*, not
 20 any particular improvement in computer technology.

21 In sum, because it simply recites a computerized version of a brick-and-mortar process for
 22 sharing information, the focus of claim 1 of the '891 patent—*dynamically sharing and un-sharing*
 23 *a file or folder*—is an abstract idea.

24 **3. Alice Step Two for Claim 1 of the '891 Patent—Evaluation of Abstract Claims for**
 25 **an Inventive Concept**

26 Having found that claim 1 of the '891 patent is directed to an abstract idea under step one
 27 of *Alice*, the Court proceeds to step two. As discussed above, at step two, the Court must

1 “consider the elements of each claim both individually and ‘as an ordered combination’” to
2 “search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient
3 to ensure that the patent in practice amounts to significantly more than a patent upon the
4 [ineligible concept] itself.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297, 1298).

5 Here, Defendant contends that claim 1 does not recite an inventive concept because it only
6 claims generic computer components used in standard ways. Mot. at 19–21. Defendant also
7 argues that elements such as the claimed “user interface,” its partitioning into “private” and
8 “common” sections, and the functions of “locking” and “unlocking” a “protection mechanism” do
9 not supply inventive concepts, citing Federal Circuit and district court opinions reaching similar
10 conclusions with respect to similar elements. *Id.* at 20–21.

11 In response, Plaintiff acknowledges that “the basic technology of allowing two users to
12 share a computer file or folder over a network was an established prior art.” Opp’n at 12. Plaintiff
13 nevertheless argues that claim 1 recites an inventive concept because it recites a solution that goes
14 beyond mere sharing and un-sharing files which is “more dynamic and instantaneous” than prior
15 art solutions. *Id.* at 12–13.

16 In assessing whether a claim recites an inventive concept, the Court, under *Alice*, must
17 consider its elements “both individually and ‘as an ordered combination.’” *Alice*, 134 S. Ct. at
18 2355. The Court addresses each in turn.

19 Turning first to the individual claim elements, the Court discerns nothing that provides an
20 inventive concept. All of the hardware recited in claim 1—“computing device,” “processor,”
21 “memory,” and “program code”—is generic, and nothing in the claims nor the specification
22 indicate otherwise. Rather, the specification confirms that “the components, process steps, and/or
23 data structures described herein may be implemented using various types of operating systems,
24 computer platforms, computer programs, and/or general purpose machines.” ’891 patent, col.
25 5:54–58. The software components recited in claim 1 are also generic and do nothing more than
26 “spell out what it means to ‘apply it on a computer.’” *Capital One Bank*, 792 F.3d at 1370 (“Steps
27 that do nothing more than spell out what it means to ‘apply it on a computer’ cannot confer patent-

1 eligibility.”). For example, partitioning the “user interface” into a “common section” and “private
2 section” is a generic implementation of the idea that the user will designate files to “share” or “un-
3 share.” This is because the fact that some files are “shared” and some are “un-shared” compels
4 some form of partitioning, so partitioning the “user interface” is a necessary consequence of this
5 idea. The Federal Circuit has declined to find that such functionally-compelled features provide
6 an inventive concept. *See, e.g., Capital One Bank*, 792 F.3d at 1370 (finding that “interactive
7 interface limitation is a generic computer element” because it “simply describes a generic web
8 server with attendant software, tasked with providing web pages to and communicating with the
9 user’s computer”). As another example, the “locking” and “unlocking” of the “protection
10 mechanism” is simply a generic implementation of allowing or restricting access. Claim 1 does
11 not limit the “protection mechanism” to any specific technology or application that would make it
12 more than a recitation of “apply it on a computer.” *Alice*, 134 S. Ct. at 2358 (“Stating an abstract
13 idea ‘while adding the words ‘apply it’ is not enough for patent eligibility”). Accordingly, none
14 of the elements of claim 1 provide an inventive concept.

15 Turning to the ordered combination of the elements of claim 1, the Court finds that they
16 fail to recite an inventive concept. Nothing in claim 1 is a “non-conventional and non-generic
17 arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1350. Instead, claim 1 only
18 recites generic components that are arranged in conventional ways. For example, the “user
19 interface” is “display[ed]” on the “computing device.” ’891 patent, col. 28:42–46. Similarly, the
20 “program code” is “executed by the processor.” *Id.*, col. 28:42–44. The steps of sharing and un-
21 sharing also follow a conventional flow of first allowing a user to share a file and then allowing
22 the user to un-share that file. *See id.*, col. 28:45–29:5. As such, the ordered combination of
23 elements in claim 1 do not provide an inventive concept.

24 Plaintiff nevertheless argues that claim 1 recites an inventive concept because it recites a
25 solution that goes beyond mere sharing and un-sharing files which is “more dynamic and
26 instantaneous” than prior art solutions. Opp’n at 12–13. This argument is unpersuasive. As
27 discussed above with respect to the ’473 and ’442 patents, the Federal Circuit has made clear that

1 “there is a critical difference between patenting a particular concrete solution to a problem and
2 attempting to patent the abstract idea of a solution to the problem in general.” *Elec. Power*, 830
3 F.3d at 1356 (citation and internal quotation marks omitted). Claim 1 falls into this latter
4 category. It does not recite a “particular concrete solution,” but rather the abstract idea of
5 *dynamically sharing and un-sharing a file or folder* generally. Sharing and un-sharing—whether
6 or not in the form of files or folders—is not unique to computers. Thus, it is at best an “abstract
7 idea of a solution to the problem in general.” *Elec. Power*, 830 F.3d at 1356 (citation and internal
8 quotation marks omitted). For this reason, to the extent that Plaintiff is attempting to analogize
9 claim 1 to the Federal Circuit’s decision in *DDR*, *DDR* is distinguishable. As discussed above
10 with respect to the ’473 and ’442 patents, *DDR* requires a solution “necessarily rooted in computer
11 technology.” *DDR*, 773 F.3d at 1257. Claims that do not “require an arguably inventive device or
12 technique for displaying information” fail to meet this bar. *Elec. Power*, 830 F.3d at 1355. Thus,
13 because claim 1 does not recite a specific technology or concrete technical solution, it does not
14 recite an inventive concept under the rationale of *DDR*.

15 In sum, nothing in claim 1 of the ’891 patent recites an inventive concept. Accordingly,
16 claim 1 fails to recite patent-eligible subject matter under § 101. Because, as discussed above,
17 claim 1 is representative, this conclusion applies equally to the remaining claims of the ’891
18 patent.

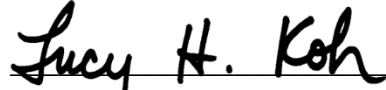
19 **IV. CONCLUSION**

20 For the foregoing reasons, the Court concludes that each of the asserted claims of the
21 Asserted Patents is directed to a patent-ineligible abstract idea, and that the limitations of the
22 asserted claims do not provide an “inventive concept” sufficient to transform these claims into
23 patentable subject matter. Accordingly, the Court GRANTS Defendant’s Motion to Dismiss. The
24 asserted claims of each of the Asserted Patents are invalid under 35 U.S.C. § 101. Because the
25 asserted claims are directed to patent-ineligible subject matter, a defect which cannot be cured
26 through amendment of a complaint, Plaintiff’s claims for infringement are DISMISSED WITH
27 PREJUDICE.

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IT IS SO ORDERED.

Dated: September 1, 2017



LUCY H. KOH
United States District Judge