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

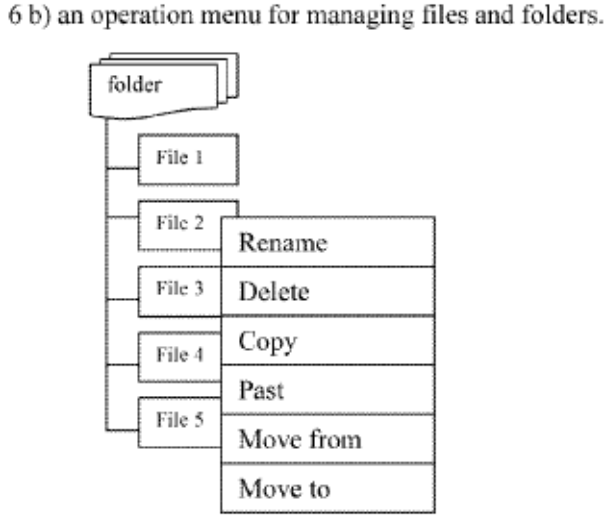
Plaintiff TS Patents is a California limited liability company with its registered office in Fremont, California. ECF No. 1 ("Compl.") ¶ 2. Defendant Yahoo! is a Delaware corporation with its principal place of business in Sunnyvale, California. Compl. ¶ 3.

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:



Id., Fig. 6B.

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

> A server supporting a plurality of users access to remote folder structures, the server comprising:
>
> memory, and non-transitory computer-readable medium comprising program code which, being executed by the server, configures the server to:
>
> create a first per user-session hierarchical list in the memory for a user session initiated via a first end-user device by a first one of the users for access to a folder structure served by the server, the first hierarchical list representing the folder structure in a reduced form, the folder structure comprising one or more folders, where each of the one or more folders is used for holding at least one data object,
>
> send a user interface comprising the first hierarchical list to the first end-user device to be displayed thereon, the displayed first hierarchical list being navigated by the first one of the users to request access to the folder structure;
>
> process the request for access to the folder structure received from the first end-user device, wherein the program code to process the request includes to update the folder structure, and also update the first hierarchical list in the memory to reflect the updated folder structure in accordance to the request,
>
> wherein the server sends an updated user interface comprising the updated first hierarchical list to the first end-user device to be displayed thereon during the user session, and deletes the first hierarchical list from the memory in response to exit of the user session.

Id., col. 14:52–15:15.

b. '473 Patent

The '473 patent is titled "Concurrent Web Based Multi-task Support for Computer 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

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

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

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

> 1. A server supporting access to resources, the server comprising: at least one hardware processor, and a network interface; wherein the server is configure to perform followings:
>
> causing display of information about resources organized by the server in a web browser on a first end-user device;

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

> 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.

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

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

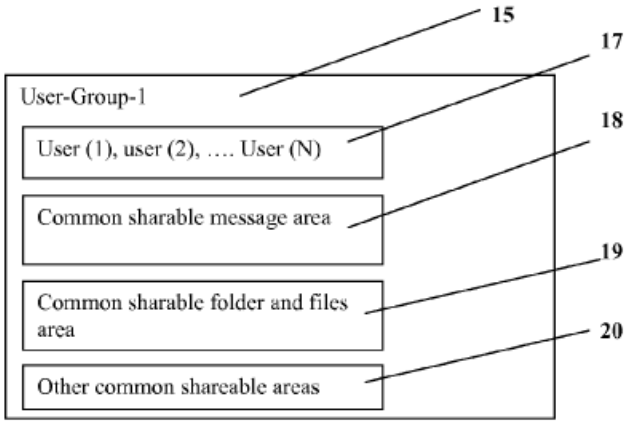


Fig. 4B

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

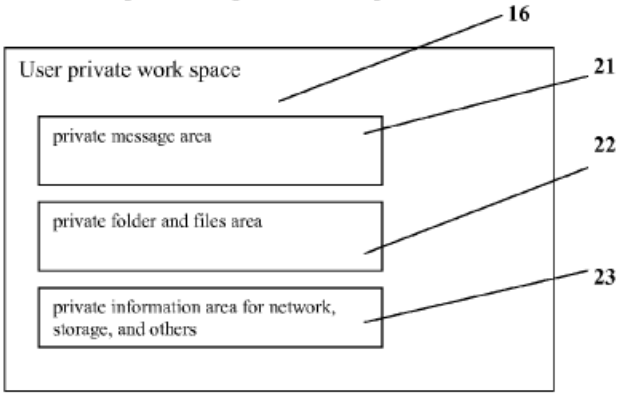


Fig. 4C

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

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

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.

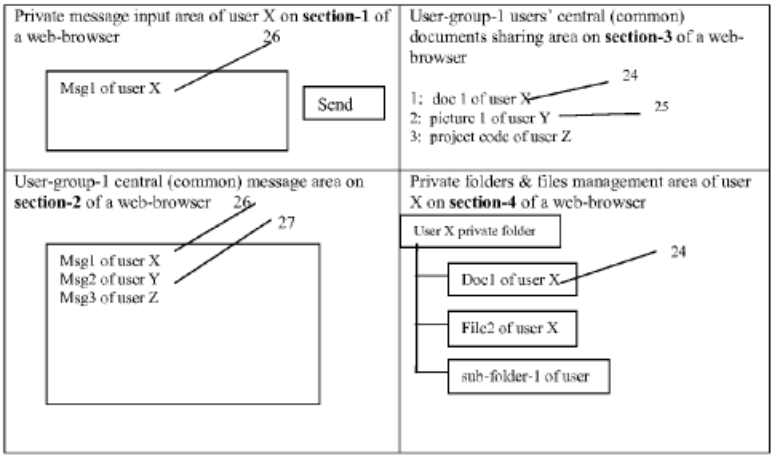


Fig. 6A

'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.

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

> 1. A computing device comprising a processor, memory and program code which, when executed by the processor, configures the device to:
>
> (i) display a user interface to each of a first user and a second user to share information, wherein each of the user interfaces comprises, for each of the first and second users, (a) a private section configured to display information about files or folders available for the user to share and (b) a common section configured to display information about files or folders shared with the user;
>
> (ii) share a file or folder selected, from the available files or folders, by the first user with the second user by (a) allowing the first user to identify the file or folder in the private section on the first user's interface, which is not viewable by the second user, (b) unlocking a protection mechanism of the file or folder to allow access to the second user, (c) storing information about the file or folder, without the content of the file or folder, in a common work place accessible to both the first user and the second user, and (d) displaying information about the file or folder in the common section on the second user's interface, wherein the second user can access the file or folder through the displayed information; and
>
> (iii) stop sharing of a file or folder to the second user that the first user has previously shared with the second user by (a) deleting information about the file or folder displayed in the common section on the second user's interface, (b) deleting information about the file or folder that has been stored in the common work place, and (c) locking the protection mechanism to rescind access to the second user.

'891 patent, col. 28:42–29:5.

II. LEGAL STANDARD

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

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.*

Paul Fire & Marine Ins. Co., 519 F.3d 1025, 1031 (9th Cir. 2008).

Nonetheless, the Court is not required to "'assume the truth of legal conclusions merely because they are cast in the form of factual allegations.'" *Fayer v. Vaughn*, 649 F.3d 1061, 1064 (9th Cir. 2011) (quoting *W. Mining Council v. Watt*, 643 F.2d 618, 624 (9th Cir. 1981)). Mere "conclusory allegations of law and unwarranted inferences are insufficient to defeat a motion to dismiss." *Adams v. Johnson*, 355 F.3d 1179, 1183 (9th Cir. 2004); *accord Iqbal*, 556 U.S. at 678. Furthermore, "'a plaintiff may plead [him]self out of court'" if he "plead[s] facts which establish that he cannot prevail on his . . . claim." *Weisbuch v. Cty. of L.A.*, 119 F.3d 778, 783 n.1 (9th Cir. 1997) (quoting *Warzon v. Drew*, 60 F.3d 1234, 1239 (7th Cir. 1995)).

B. Motions to Dismiss for Patent Validity Challenges Under 35 U.S.C. § 101

Defendant's Motion asserts that the Asserted Patents fail to claim patent-eligible subject matter under 35 U.S.C. § 101 in light of the United States Supreme Court's decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). Whether a claim recites patent-eligible subject matter under § 101 is a question of law. *In re Roslin Inst. (Edinburgh)*, 750 F.3d 1333, 1335 (Fed. Cir. 2014) ("Section 101 patent eligibility is a question of law[.]"); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) (same). Accordingly, a district court may resolve the issue of patent eligibility under § 101 by way of a motion to dismiss. *See, e.g., Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1345 (Fed. Cir. 2014) (affirming determination of ineligibility made on 12(b)(6) motion); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713 (Fed. Cir. 2014) (same); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1351 (Fed. Cir. 2014) (affirming determination of ineligibility made on motion for judgment on the pleadings).

Although claim construction is often desirable, and may sometimes be necessary, to resolve whether a patent claim is directed to patent-eligible subject matter, the Federal Circuit has explained that "claim construction is not an inviolable prerequisite to a validity determination under § 101." *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (U.S.)*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2013). Where the court has a "full understanding of the basic character of the

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

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

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

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

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

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

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

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

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

Two of the U.S. Supreme Court's leading cases concerning the "abstract idea" exception involved claims held to be abstract because they were drawn to longstanding, fundamental economic practices. *See Alice*, 134 S. Ct. at 2356 (claims "drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk" were directed to an 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).

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

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

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

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

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

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

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

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

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

[2] One court has noted that, like all tools of analysis, the "pencil and paper" analogy must not be unthinkingly applied. *See California Inst. of Tech. v. Hughes Commc'ns Inc.*, 59 F. Supp. 3d 974, 995 (C.D. Cal. 2014) (viewing pencil-and-paper test as a "stand-in for another concern: that 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").

3. *Alice* Step Two—Evaluation of Abstract Claims for a Limiting Inventive Concept

A claim drawn to an abstract idea is not necessarily invalid if the claim's limitations—considered individually or as an ordered combination—serve to "transform the claims into a patent-eligible application." *Content Extraction*, 776 F.3d at 1348. Thus, the second step of the *Alice* analysis (the search for an "inventive concept") asks whether the claim contains an element or combination of elements that ensures that the patent in practice amounts to significantly more than a patent upon the abstract idea itself. *Alice*, 134 S. Ct. at 2355.

The U.S. Supreme Court has made clear that a transformation of an abstract idea to a patent-eligible application of the idea requires more than simply reciting the idea followed by "apply it." *Id.* at 2357 (quoting *Mayo*, 132 S. Ct. at 1294). In that regard, the Federal Circuit has repeatedly held that "[f]or the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than the performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*, 776 F.3d at 1347-48 (quoting *Alice*, 134 S. Ct. at 2359) (alterations in original); *see also Mortgage Grader*, 811 F.3d at 1324–25 (holding that "generic computer components such as an 'interface,' 'network,' and 'database' . . . do not satisfy the inventive concept requirement."); *Bancorp Servs.*, 687 F.3d at 1278 ("To salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not."). Similarly, "[i]t is well-settled that mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea" where those components simply perform their "well-understood, routine, conventional" functions. *In re TLI Commc'ns.*, 823 F.3d at 613 (limitations of "telephone unit," "server," "image analysis unit," and "control unit" insufficient to satisfy *Alice* step two where claims drawn to abstract idea of classifying and storing digital images in an organized manner) (quotation marks omitted).

In addition, the U.S. Supreme Court explained in *Bilski* that "limiting an abstract idea to one field of use or adding token postsolution components [does] not make the concept

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

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

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

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

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

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

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

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

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

[3] Specifically, independent claims 6 and 12 also recite the same basic steps of: (1) "creat[ing] . . . a . . . hierarchical list . . . ," (2) "send[ing] a user interface . . . ," and (3) "process[ing] the request for access . . . ." '547 patent, col. 14:52–15:15, col. 15:34–56, col. 16:18–48. Dependent claims 2–5, 7–11, and 13–20 introduce additional minor limitations to these basic steps. For example, claims 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.

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

a. Claim 1 of the '547 Patent—"Directed to" Inquiry

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

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

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

b. Claim 1 of the '547 Patent—Abstract Idea Analysis

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

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

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

> in *Content Extraction and Transmission LLC v. Wells Fargo Bank, National Ass'n*, we held the concept of "1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory" abstract. 776 F.3d 1343, 1347 (Fed. Cir. 2014). In particular, the invention there involved extracting data from a document, entering the data into appropriate data fields, and 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

> 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).

Id.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. The '473 Patent

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

1. Scope of Analysis and Representative Claim

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

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

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

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

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

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

a. Claim 1 of the '473 Patent—"Directed to" Inquiry

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[5] The Court notes that the specification also discloses that there are also "non-conventional lock mechanisms created in this invention." *Id.*, col. 3:22–23. These "non-conventional lock mechanisms" differ from "conventional" lock mechanisms in that the "non-conventional lock mechanisms . . . can be acquired by one thread and may be released by the same thread or by another thread," whereas the "conventional" lock mechanisms only "can be acquired and released 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.

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

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

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

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

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

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

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

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

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

C. The '442 Patent

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

1. Scope of Analysis and Representative Claim

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

[6] Specifically, independent claims 1 and 17 also recite the basic steps of: (1) "display[ing] . . . metadata of files and folders . . .;" (2) "allow[ing] a first user [to] select[] . . . from the metadata displayed;" (3) "stor[ing] the metadata, but not the content . . . ;" (4) "display[ing] to a second user the stored metadata . . . ;" and (5) "allow[ing] the second user access to the content . . . ." *See* '442 patent, col. 22:2–21, col. 23:4–27, col. 24:21–41. Dependent claims 2–8, 10–16, and 18–20 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.

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

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

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

a. Claim 9 of the '442 Patent—"Directed to" Inquiry

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

D. The '891 Patent

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

1. Scope of Analysis and Representative Claim

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

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

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

[7] For example, claims 2 and 3 add functionality where the first and second user can exchange messages. '891 patent, col. 29:6–30:9. Claim 4 clarifies that the user interface appears on a web 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.

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

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

a. Claim 1 of the '891 Patent—"Directed to" Inquiry

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

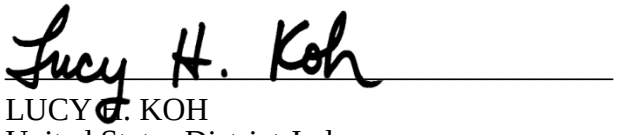
In sum, nothing in claim 1 of the '891 patent recites an inventive concept. Accordingly, claim 1 fails to recite patent-eligible subject matter under § 101. Because, as discussed above, claim 1 is representative, this conclusion applies equally to the remaining claims of the '891 patent.

IV. CONCLUSION

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

IT IS SO ORDERED.

Dated: September 1, 2017



LUCY H. KOH
United States District Judge