UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

BSD CROWN, LTD.,

Plaintiff,

v.

AMAZON.COM, INC., et al.,

Defendants.

Case No. 3:23-cv-00057-WHO

**ORDER DENYING MOTION FOR JUDGMENT ON THE PLEADINGS**

Re: Dkt. No. 75

Plaintiff BSD Crown, Ltd. ("BSD") filed this case against defendants Amazon.com, Amazon Web Services, Inc., and Twitch Interactive, Inc. (collectively, "Amazon") for alleged infringement of its patent for a method for data transmission that allows for real-time broadcasting of videos and audio. Amazon filed a motion for judgment on the pleadings, arguing that the patent-in-suit and its claim are ineligible under 35 U.S.C. § 101 because the claim is directed to the abstract idea of collecting, packaging, and conveying data in real time. For the following reasons, the motion is DENIED.

## BACKGROUND

### I. FACTUAL BACKGROUND

BSD alleges that the defendants infringed one of its patents through their use of real-time video and audio streaming technology. Complaint ("Compl.") [Dkt. No. 1]. BSD owns the rights to the disputed patent, U.S. Patent No. 6,389,473, (the "'473 Patent" or the "patent-in-suit"), which is entitled "Network Media Streaming." [Dkt. No. 1-1].

The '473 Patent teaches a process for real-time transmission of video and audio broadcasts using network technology. BSD alleges that prior to the invention of the '473 Patent, real-time audio and video streaming "faced technical problems that negatively affected video quality unless

expensive, dedicated equipment was deployed." Compl. ¶ 23. The prior art used expensive hardware to compress and transmit data from a source computer to a recipient computer, requiring a non-internet link between the source computer and the server as well as a "high-cost" encoder to package data for the server. '473 Patent 1:16-47. Ultimately that meant only computers with "a suitable, dedicated encoder and broadcast server" could provide real-time broadcasting. *Id.* 1:34-47.

An overarching objective of the '473 Patent is to provide a process for real time data broadcasting that does not require expensive hardware and instead uses "common, existing server and network infrastructure . . . without the need for a dedicated broadcast computer system." *Id.* 1:50-58. In other words, the goal of the patent is to improve the prior art by achieving the same result—real-time data broadcasting—but "using common, universally-supported Internet communication protocols," which reduces costs and allows personal computers to remotely broadcast multimedia programs. *Id.* 1:58-67.

> The only independent claim in the patent is Claim 1:
>
> A method for real-time broadcasting from a transmitting computer to one or more client computers over a network, comprising:
>
> providing at the transmitting computer a data stream having a given data rate;
>
> dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith;
>
> encoding the slices in a corresponding sequence of files, each file having a respective index;
>
> and uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate.

*Id.* 14:18-32.

The four objects of the patent are: (1) "to provide substantially continuous, high-bandwidth data streaming over a network using common, existing server and network infrastructure"; (2) "to provide data broadcasting capability, particularly for multimedia data, without the need for a dedicated broadcast computer system"; (3) "to provide apparatus and methods for data broadcasting at reduced cost by comparison with systems known in the art"; and (4) "to enable a personal computer to remotely broadcast a multimedia program through an Internet service

provider (ISP) using common, universally-support Internet communication protocols." *Id.* 1:50-67. Multimedia "refers to images or sound or to data representative of images or of sound or a combination thereof," including text. *Id.* 2:32-37.

The specifications teach that the data stream from the transmitting computer is compressed and divided into "segments or slices" of data, "preferably time slices," and preferably each slice is "assigned a respective slice index." *Id.* 2:2-7. The transmitting computer monitors the data stream and compresses it to align with the available bandwidth on the link between the computer and server. *Id.* 3:14-23, 9:32-48. The sequences of slices are then wirelessly uploaded to a server over a network, preferably via the File Transfer Protocol ("FTP") internet protocol, in real time. *Id.* 2:6-11, 14:18-29.

Then, the server sends data to the client computer via an internet protocol, preferably HTTP. *See id.* 2:1-28, 14:33-35. The server sends the data by transmitting data slices at different quality levels, depending on available bandwidth of the client computer. *Id.* 3:5-13; *see also id.* 4:39-47, 11:9-22. Preferably the data stream is transmitted using the Hypertext Transfer Protocol ("HTTP"), which is "known in the art." *Id.* 2:11-21. The specifications indicate that each data slice is preferably in its own separate file, though they can also be contained "in a single indexed file," as both are supported by HTTP. *Id.* 2:21-28.

BSD alleges that its patent "resolved" technical problems in the "delivery of audio and video to client computers"—namely, it used "common" servers and infrastructure, such as HTTP, rather than expensive and specific equipment for transmitting audio and video. Compl. ¶¶ 23-24. The use of HTTP also allowed scaling by easily sending the audio and video to "simultaneous viewers," which was not possible with the prior art. *Id.* ¶ 24. The "contrarian" and "non-conventional" use of these servers and data transmission techniques also improved video quality while decreasing costs. *Id.*

## II. PROCEDURAL BACKGROUND

The defendants filed a motion to dismiss the case, which I granted in part and denied in part. [Dkt. No. 51]. Amazon.com filed a motion to certify a question for interlocutory appeal, which I denied. [Dkt. No. 71]. The plaintiffs did not amend their complaint and the case

proceeded.

The defendants then filed a motion for judgment on the pleadings. [Dkt. No. 75]. BSD opposed. [Dkt. No. 76]. Amazon replied. [Dkt. No. 82]. I held a hearing at which counsel for both parties appeared.

**LEGAL STANDARD**

Federal Rule of Civil Procedure ("FRCP") 12(c) provides that "[a]fter the pleadings are closed—but early enough not to delay trial—a party may move for judgment on the pleadings." Fed. R. Civ. Proc. 12(c). "Dismissal under Rule 12(c) is warranted when, taking the allegations in the complaint as true, the moving party is entitled to judgment as a matter of law." *Daewoo Elecs. Am. Inc. v. Opta Corp.*, 875 F.3d 1241, 1246 (9th Cir. 2017) (citation omitted). "[M]otions for judgment on the pleadings are functionally identical to Rule 12(b)(6) motions." *Webb v. Trader Joe's Co.*, 999 F.3d 1196, 1201 (9th Cir. 2021) (internal quotation marks omitted) (citing *United States ex rel. Cafasso v. Gen. Dynamics C4 Sys., Inc.*, 637 F.3d 1047, 1054 n.4 (9th Cir. 2011)). "[U]nder both rules, 'a court must determine whether the facts alleged in the complaint, taken as true, entitle the plaintiff to a legal remedy.'" *Chavez v. United States*, 683 F.3d 1102, 1108 (9th Cir. 2012) (citation omitted). For both motions, dismissal may be based on either the lack of a cognizable legal theory or absence of sufficient facts alleged under a cognizable legal theory. *Robertson v. Dean Witter Reynolds, Inc*., 749 F. 2d 530, 534 (9th. Cir. 1984) (citation omitted).

A plaintiff's complaint must allege facts to state a claim for relief that is plausible on its face. *See Ashcroft v. Iqbal*, 556 U.S. 662, 677 (2009). A claim has "facial plausibility" when the party seeking relief "pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id.* Although the Court must accept as true the well-pled facts in a complaint, conclusory allegations of law and unwarranted inferences will not defeat an otherwise proper Rule 12(b)(6) motion. *See Sprewell v. Golden State Warriors*, 266 F.3d 979, 988 (9th Cir. 2001). "[A] plaintiff's obligation to provide the 'grounds' of his 'entitle[ment] to relief' requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do. Factual allegations must be enough to raise a right to relief above the speculative level." *See Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007)

(citations and footnote omitted).

**DISCUSSION**

Amazon argues that the '473 Patent is invalid as a matter of law under 35 U.S.C. § 101 and *Alice* because it is directed to ineligible subject matter—the abstract idea of real-time data transmission—and because the claims do not recite significantly more than this abstract idea. *See* D. Mot.

Title 35 of the United States Code § 101 "defines the subject matter that may be patented under the Patent Act." *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). Under § 101, patentable subject matter includes "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. "These categories are broad, but they are not limitless." *Twilio, Inc. v. Telesign Corp.*, 249 F. Supp. 3d 1123, 1136 (N.D. Cal. 2017). "Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (citation omitted). This is so because "they are the basic tools of scientific and technological work," which are "free to all [persons] and reserved exclusively to none." *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71 (2012) (citations omitted). Allowing patent claims for such purported inventions "might tend to impede innovation more than it would tend to promote it." *Id.* But courts must "tread carefully in construing this exclusionary principle lest it swallow all of patent law." *Alice*, 573 U.S. at 217 (citing *Mayo*, 566 U.S. at 70-71). "At some level, 'all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Id.* (quoting *Mayo*, 566 U.S. at 71). Accordingly, "applications of such concepts to a new and useful end . . . remain eligible for patent protection." *Id.* (cleaned up) (citation omitted).

The two-step *Alice* framework distinguishes "patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* First, courts must "determine whether the claims at issue are directed to a patent-ineligible concept." *Id.* at 218. If so, courts then assess whether "the elements of each claim, both individually and 'as an ordered combination' . . . 'transform the nature of the claim' into a patent-eligible application." *Id.* at 217 (citation omitted).

Although claim construction is sometimes necessary to resolve whether a patent claim is directed to unpatentable subject matter, the Federal Circuit has clarified 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. 2012). 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 & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n,* 776 F.3d 1343, 1349 (Fed. Cir. 2014). The parties do not contest that no claim construction is required to resolve this motion.

For the following reasons, I find that the patent is not directed to an abstract idea, and even if it were, it contains an inventive concept that transforms the nature of the claim. Fundamentally, Claim 1 teaches a method for data transmission between computers that uses protocols and data slicing and matching. Though the object of the claim is not necessarily apparent from the claim language on its own, the specification explains that this method solves for a problem in the prior art—the use of expensive hardware that limits who and what kinds of computers can perform real time broadcasting. The claim as contextualized by the specification, then, is directed to the improvement in data transmission technology that results from using network protocols and specific data slicing and matching. It is not directed to the abstract idea of data transmission and collection, as Amazon asserts. In prior cases that involved patents with similarly broad language ("providing" data, "encoding," "uploading," etc.), the patents taught only the abstract idea; they did not teach methods for improving the technology. Here, though, the claim teaches the method that improves the technology; it teaches the use of network and protocols instead of hardware. And even if the claim language is construed as directed to the abstract idea of real-time data transmission, the inventive concept—teaching the use of the networks, protocols, and data slices rather than expensive, physical hardware—transforms the nature of the claim into a patent eligible application.

## I. ALICE STEP ONE

To determine whether claims are directed to a patent-ineligible concept, the court must "articulate with specificity what the claims are directed to and ask whether the claims are directed

to an improvement to . . . functionality versus being directed to an abstract idea." *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1258 (Fed. Cir. 2017) (internal quotation marks and citations omitted); *see also Synopsys, Inc. v. Siemens Indus. Software Inc.*, No. 20-CV-04151-WHO, 2023 WL 5174291, at *4 (N.D. Cal. June 30, 2023) (subsequent history omitted) (same).

Although "[t]he Supreme Court has not established a definitive rule" for defining "abstract idea" under step one, the Federal Circuit and Supreme Court "have found it sufficient to compare 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, 1334-35 (Fed. Cir. 2016) (citation omitted). The Federal Circuit also has instructed that this inquiry asks "what the patent asserts to be the focus of the claimed advance over the prior art." *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020) (internal quotation marks and citations omitted).

The first step of the *Alice* framework does not "simply ask whether the claims *involve* a patent-ineligible concept" but rather "applies 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.'" *Enfish*, 822 F.3d at 1335 (citations omitted); *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, 60 F.4th 1349, 1356 (Fed. Cir. 2023) ("[Courts] focus on the language of the asserted claims, considered in light of the specification." (citing *Yu v. Apple*, 1 F.4th 1040, 1043 (Fed. Cir. 2021)); *Stormborn Techs., LLC v. Topcon Positioning Sys., Inc.*, 444 F. Supp. 3d 1119, 1124 (N.D. Cal. 2020) ("[T]he claims are to be read as a whole in light of the specification."). In doing so, the court must avoid "overgeneralizing" those claims or stating them at too "high [of a] level of abstraction." *TecSec, Inc.*, 978 F.3d at 1293 (internal quotation marks and citations omitted); *see also RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017) (noting the relevant inquiry focuses "on the claim *as a whole*").

Amazon makes three overlapping arguments for *Alice* step one. First it says that the Federal Circuit found similar claims and patents were not abstract. Mot. 8:20-10:20. Those cases are addressed throughout this analysis. Second it says that Claim 1 is ineligible because it uses broad functional language and does not explain how to achieve the desired result. *Id.* 21-12:8. But as explained below, the desired result is real-time video and audio broadcasting that uses less

expensive and more accessible technology, like internet protocols; the claim and specification appropriately explain how to achieve this. Third, Amazon asserts Claim 1 fails to describe improvement in computer functionality, *id.* 12:9-14:12, but this is exactly what the claimed invention does: it improves existing computer functionality by teaching new ways of achieving results.

**A. The claims are not directed to an abstract idea, nor do they use merely functional language.**

The overarching theme of Amazon's motion is that Claim 1 is directed to a patent-ineligible concept because it is directed to collecting, packaging, and transmitting data. Amazon says these are abstract ideas and that they use purely functional language, instead of language directed to a specific method of achieving a goal.

The Federal Circuit has directed courts to "look to whether the claims in the patent focus on a specific means or method, or are instead directed to a result or effect that itself is the abstract idea and merely invokes generic processes and machinery." *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (citation omitted). "[A] claim must have the specificity required to transform the claim from one claiming only a result to one claiming a way of achieving it to avoid ineligibility." *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363 (Fed. Cir. 2021) (cleaned up) (quoting *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167-68 (Fed. Cir. 2018)). "[A] claim is ineligible if it fails to recite a practical way of applying an underlying idea and instead is drafted in such a result-oriented way that it amounts to encompassing the principle in the abstract no matter how implemented." *Id.* (cleaned up) (quoting *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018)).

But at the "eligibility phase," "[a]ll that is required . . . is that the claim itself 'must identify "how" that functional result is achieved by limiting the claim scope to structures specified at some level of concreteness . . . or to concrete action, in the case of a method claim.'" *Id.* (quoting *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 (Fed. Cir. 2020)). "[I]t is appropriate to 'examine the claims in light of the written description' in performing this analysis." *Stormborn Techs.*, 444 F. Supp. 3d at 1124 n.2 (first quoting *Amdocs (Israel) Ltd. v. Openet*

*Telecom, Inc.*, 841 F.3d 1288, 1299 (Fed. Cir. 2016); then citing *Enfish*, 822 F.3d at 1335; and then citing *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611-15 (Fed. Cir. 2016)).

As a preliminary note, I am unpersuaded by Amazon's apparent attempts to isolate individual steps of the claim and argue that each step is abstract, functional, or overbroad. *See* Mot. 9:6-27; 11:16-26. I am equally unpersuaded by Amazon's arguments that because the claim language itself does not explain the objectives of the patent—such as reducing the need for expensive hardware—then I cannot consider those objectives when assessing the claim. *See* Repl. 11:10-12:2. Amazon does not cite case law that says courts dissect claims in such a way; indeed, to analyze eligibility, courts look to the claim as a whole as contextualized by the specification. *See Enfish*, 822 F.3d at 1335; *Hawk Tech. Sys.*, 60 F.4th at 1356; *RecogniCorp*, 855 F.3d at 1326; *Stormborn Techs.*, 444 F. Supp. 3d at 1124 & n.2.

Here, when read as a whole and in the context of the specification, Claim 1 focuses "on a specific means or method" of real-time data broadcasting and is not directed to the abstract idea of data transmission itself. *See Two-Way Media*, 874 F.3d at 1337. As described by the patent and complaint, real-time data transmission generally involves a data source or transmitting computer, a way of sending data from the source to a server, a server, a way of sending the data from the server to the recipient computer, and a way to read or receive the data by the recipient computer. *See* '473 Patent 1:11-47; Figs. 1, 2. The prior art required an "encoder" connected directly to the transmitting computer to send data from the computer to the server, and the encoder and the server itself both had to be "high-cost dedicated" systems and hardware. *Id.* 1:23-47; *see also id.* Fig. 1. The '473 Patent teaches a similar process at a high level, but it specifies that instead of an expensive hardware encoder with a direct link to the transmitting computer, the invention uses a network protocol to send the data wirelessly from the transmitting computer to the server. *Id.* 2:1-28; *see also id.* 14:18-29. The server then sends data to the client computer via a network protocol, preferably HTTP. *See id.* 2:1-28, 14:33-35. In addition to transmitting the data to the server in a different way from the prior art, the specification also teaches that the transmitting computer monitors the data stream and compresses it to align with the available bandwidth on the link between the computer and server. *Id.* 3:14-23, 9:32-48. The specification teaches a similar

process for transmitting data from the server to the client computer. *Id.* 3:5-13; *see also id.* 4:39-47, 11:9-22. The claim itself teaches that the data stream has "a given data rate" at the transmitting computer and it is divided into slices with "a predetermined size," *id.* 14:18-25, and the specification contextualizes that these data rates and sizes are determined based on the available bandwidth of the server and recipient computers, *see id.* 11:9-22.

Looking at the claim as a whole in light of the specification, the patent teaches and is directed to the use of networks instead of hardware to transmit data, not the transmission of data itself. *See Free Stream Media Corp.*, 996 F.3d at 1363. It is true that the claim "*involve[s]* a patent-ineligible concept," *Enfish*, 822 F.3d at 1335—data transmission, collection, and packaging—but the character of the claim as a whole is "*directed* to" using internet protocols and data slicing to carry out that objective, *id.* at 1334 (emphasis added), thereby improving the prior art by making real-time processing possible without the expensive hardware. And, it is limited in scope to the act of transmitting data via this method—it does not purport to encompass all methods of data transmission. *See Free Stream Media Corp.*, 996 F.3d at 1363. This parallels the claim in *Stormborn Technologies* that I found was not "merely result-oriented" in part because it "explain[ed] how the claimed invention is an improvement from prior art . . . systems and focus[ed] on the elements that provide benefits over prior art." 444 F. Supp. 3d at 1125 (citing *Enfish*, 822 F.3d at 1335). Here, the claim recites a practical way of achieving real-time data broadcasting by teaching the use of internet protocols and data slicing in the above-described way. It is sufficiently specific to teach a way of achieving that result, instead of teaching the result itself. *See Free Stream Media*, 996 F.3d at 1363.

**B. Amazon's cases demonstrate why the claim is directed to an improvement in prior art computer functionality, not an abstract idea.**

As noted, the Federal Circuit instructs courts to look at what the patent asserts as the claimed advance over prior art. *TecSec,* 978 F.3d at 1292. Claims related to computer software "satisfy *Alice* step one when they are 'directed to a specific implementation of a solution to a problem in the software arts,' such as an improvement in the functioning of a computer." *RecogniCorp*, 855 F.3d at 1326 (quoting *Enfish*, 822 F.3d at 1338-39); *see also Finjan, Inc. v.*

*Blue Coat Sys., Inc.*, 879 F.3d 1299, 1304 (Fed. Cir. 2018) ("[S]oftware-based innovations can make 'non-abstract improvements to computer technology' and be deemed patent-eligible subject matter at step 1." (quoting *Enfish*, 822 F.3d at 1335-36)). But computer related patents will be found abstract at step one if the focus of the claims is a "process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool," including if the claim involves "generalized steps to be performed on a computer using conventional computer activity." *RecogniCorp*, 855 F.3d at 1326-27 (citations omitted); *see also Enfish*, 822 F.3d at 1335-36.

In *Enfish*, 822 F.3d at 1330, 1336, the claim taught a detailed way of storing and retrieving data via a "self-referential" table instead of a more standard "relational" model. "[T]he self-referential table recited in the claims . . . is a specific type of data structure designed to improve the way a computer stores and retrieves data in memory." *Id.* at 1339. The claim taught how the self-referential table functioned, including how it self-referred to other parts of the computer's data table. *See id.* at 1330-31, 1336. Though the district court concluded that the claims were directed to the abstract idea of storing, organizing, and retrieving memory in a logical table or organizing information using tabular formats, the Federal Circuit reversed, holding that the claims were not "directed to *any* form of storing tabular data" but rather to the specific storage that used the self-referential table. *Id.* at 1337. The court noted that this conclusion was "bolstered" by the specification, which taught the benefits of the self-referential table over the standard databases, including flexibility, speed, and decreased memory requirements. *Id.* The claim therefore was directed to improving computer functionality—using a self-referential database instead of a relational database for storage and organization—not to the abstract concept of storing data, for which the computer would be used in its ordinary capacity. *See id.* at 1336.

This reasoning is directly relevant here. Though Amazon asks me to conclude that BSD's patent is directed to *any* form of collecting, packaging, and transmitting data—or any form of real-time broadcasting—the language of the claims confirm that the patent is directed to the specific method of real-time broadcasting that "us[es] an Internet protocol" to transmit data at "a given rate" from one computer to another. '473 Patent 14:18-35; *see also Recognicorp*, 855 F.3d at 1327 (warning against defining a claim at too "high level of abstraction and untethered from the

language of the claims"). Like the patent in *Enfish*, here too the claim is directed to improving computer functionality—using a network protocol and data matching instead of expensive hardware to transmit the data. And also as in *Enfish*, this conclusion is "bolstered" by the specification, which teaches the benefits of using network protocols and data slices that can conform to the requirements of the client computer, over the prior art's use of expensive hardware that requires linking to the server and so cannot be used by most computer users. *See* '473 Patent 1:23-47. Accordingly, the claim is *directed* to the use of networks and data slicing to transmit real-time data streams, not to the abstract concept of data transmission for which a computer may be used in its ordinary capacity. *Cf. Enfish*, 822 F.2d at 1336. And because the claim is directed to improving the computer capabilities in the prior art, rather than "an abstract idea that merely invokes computers as a tool," Amazon's citation to *Bridge & Post, Inc. v. Verizon Communications*, 778 F. App'x 882, 889 (Fed. Cir. 2019) (unpublished) (citation omitted), is not persuasive.

That the claim and specification teach this specific method of data transmission, rather than the abstract process of data transmission or packaging, is supported by the claimed advance over prior art. *See TecSec*, 978 F.3d at 1292. The patent describes the prior art as requiring dedicated hardware for the link between the transmitting computer and the server, as well as for the encoder and servers themselves. *See* '473 Patent 1:16-47. That hardware was expensive and also limited access to real-time broadcasting abilities. *See id.* The '473 Patent, though, teaches the use of different technology to yield similar results with different means, thereby improving the prior art by negating the need for hardware, decreasing cost, and reaching more computers. *Cf. Finjan*, 879 F.3d at 1304 (holding that the patent was eligible at *Alice* step one because it made a non-abstract improvement to computer technology by "enabl[ing] more flexible and nuanced" performance of the task). The claim is not directed to the real-time broadcasting itself but rather to the novel way of improving performance of that broadcast.

Amazon's cases do not dictate a different result. First, the disputed patent in *Hawk Technology*, 60 F.4th at 1352-53, claimed a method for viewing multiple stored video images simultaneously, including receiving, digitizing, displayed, converting, and storing the images;

providing an access link to the storage; receiving an access request, and transmitting and displaying the video images. The patent allegedly provided solutions for the problem of many users demanding higher quality video content in part by reducing the burden of data transmission. *Id.* at 1354. The Federal Circuit found the patent ineligible at step one, holding that the claims were directed to "general abstract ideas—displaying images, converting them into a format, transmitting them, and so on." *Id.* at 1356-57. It rejected the plaintiff's argument that the claim was directed to a solution to a technical problem in the existing technology because the claim itself neither disclosed performing that solution nor explained how the goal was achieved. *Id.* at 1357. Instead, the claim itself merely taught data conversion, which the court found was "an abstract idea." *Id.* (citation omitted).

Here, despite its use of similar functional language, Claim 1 does not merely teach an abstract idea: it is directed to a specific method of real-time data broadcasting which solves for problems in the prior art. *See RecogniCorp*, 855 F.3d at 1326. As explained by the specification, the problem the claim solves is having to use expensive hardware for real-time broadcasting; network protocols like HTTP substitute for the hardware, and those protocols combine with the data slicing and matching to transmit data to recipient computers. Because the claim teaches the use of known internet protocols and data slices and indices to transmit data at different quality levels in real time to client computers, the claim therefore discloses *how* to perform the solution to the technical problems by providing the method for doing so. In this way, it differs from the claim in *Hawk Technology*, where the claim itself did not teach a solution to the problem discussed in the specification. Accordingly, this case does not support Amazon's position.

For similar reasons, the analysis in *Two-Way Media* is not directly on point. There, the disputed patent claimed a method for transmitting packets of data in real time to multiple recipients. *Two-Way Media*, 874 F.3d at 1333-34. The representative claim recited a method to transmit the packets by converting audio or video streams into multiple streams, routing those streams to users, controlling the routing "in response to selection signals," and monitoring receipt by users. *Id.* at 1334-35. The Federal Circuit held that this "result-based functional language" failed to describe how to achieve the results "in a non-abstract way." *Id.* at 1337 (citation

omitted). It cited to other cases with similar claims directed to abstract ideas. *See id.* at 1337-38 (collecting cases). But again, *Two-Way Media* differs from the present case because of what the claim was directed to: there, it was to the abstract result of converting and routing data to multiple recipients, but here it is to the specific *method* of real-time data transmission that uses internet protocols like HTTP as well as data slicing and matching. The '473 Patent is therefore directed to "a specific implementation of a solution to a problem in the software arts," *RecogniCorp,* 855 F.3d at 1326, which, despite the patent's use of similar functional language, differentiates it from the patent in *Two-Way Media*. For similar reasons, the claim here differs from those in *In re TLI Communications LLC Patent Litigation*, which were "directed to the abstract idea of classifying and storing digital images," rather than solving any "technological problem." 823 F.3d 607, 613 (Fed. Cir. 2016) (citations omitted). These cases are not dispositive here.

Amazon also asserts that use of known technology in the claim renders the patent ineligible, but that is not what its citations provide. For example, it cites an unpublished decision where the Federal Circuit held that the claim failed to identify a particular technique for carrying out the claimed objective—data compression—and instead accepted "as a given" that many techniques were available. *See Realtime Data LLC v. Array Networks Inc.*, No. 2021-2251, 2023 WL 4924814, at *8 (Fed. Cir. Aug. 2, 2023) (unpublished), *cert. denied sub nom. Realtime Data LLC v. Fortinet, Inc.*, No. 23-498, 2024 WL 72018 (U.S. Jan. 8, 2024). The court did not hold, though, that using one of those known techniques would render the patent ineligible, which is what Amazon seems to imply in its papers. And here, though one of the steps of Claim 1 is similar to data compression because it involves "encoding" data into slices and indices with particular sizes, the claimed *objective* is not data compression: it is real-time broadcasting using more easily accessible and less expensive technology. As addressed, the claim teaches a technique for that objective. *See Free Stream Media Corp.*, 996 F.3d at 1363. That the claim also teaches data compression as a step involved in broadcasting, without providing extensive detail as to how to compress the data, does not mean the patent teaches only an abstract concept.

For similar reasons, Amazon's argument that using "general components" in the claim does not sufficiently limit the claim scope is also unpersuasive. Its cited case does not stand for

the proposition that general components cannot limit the claim scope or provide specificity, but rather that the general components did not save *that* claim, which that was "entirely functional in nature." *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016). Indeed the Federal Circuit noted that patent claimed a function of wireless regional communication—which was abstract and overbroad—"not a particular way of performing that function." *Id.* Here though, as discussed, Claim 1 is directed to a particular way of performing real-time broadcasting and is not entirely functional. *Affinity Labs* is not directly applicable.

For those reasons, I agree with BSD that its patent is directed to improving computer functionality rather than at an abstract idea. It is directed to patent-eligible software at *Alice* step one and the defendant's motion is DENIED on this basis.

## II. ALICE STEP TWO

Even if I accept Amazon's broad characterization of BSD's claim as directed to the abstract concept of data collecting, packaging, and transmitting, there is an inventive concept that transforms the claim under *Alice* step two because the patent teaches that the computers and system perform something more than and different from what was previously known in the industry.

At step two, I "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." *Enfish*, 822 F.3d at 1334 (quoting *Alice*, 573 U.S. at 217). In doing so, I "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*, 572 U.S. at 217-18 (internal quotation marks and citation omitted). The Federal Circuit has held that the inventive concept in step two must be contained in the claim itself, "as opposed to something purportedly described in the specification." *Two-Way Media*, 874 F.3d at 1338 (citation omitted). However, it is appropriate to use the specifications to "inform [the court's] understanding of the claimed invention and the technological solution," and "how the elements in the claim functioned together." *Mentone Sols. LLC v. Digi Int'l Inc.*, No. 2021-1202, 2021 WL 5291802, at *5 (Fed. Cir. Nov. 15, 2021) (unpublished) (citing *Packet*

*Intelligence LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1309-10 (Fed. Cir. 2020)). "Accordingly, the specification cannot save claims directed at an abstract idea but can inform my understanding of whether the claimed invention provides a technological solution or inventive concept that transforms the claim into a patent-eligible application." *Synopsys*, 2023 WL 5174291, at *3.

"In computer-implemented inventions, the computer must perform more than 'well-understood, routine, conventional activities previously known to the industry.'" *CosmoKey Sols. GmbH & Co. KG v. Duo Sec. LLC*, 15 F.4th 1091, 1097 (Fed. Cir. 2021) (quoting *Alice*, 573 U.S. at 223). "An inventive concept that transforms the abstract idea into a patent-eligible invention must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer." *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016) (citing *Alice*, 573 U.S. at 222-23). However, "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Id.* at 1350.

As plausibly alleged and stated in the patent itself, the claim and specifications teach an inventive concept that "amounts to significantly more" than the abstract concept of collecting, packaging, and transmitting data. *See Alice*, 572 U.S. at 217-18. As discussed, the patent teaches a method of data transmission that allows for real-time broadcasting without dedicated hardware servers. Claim 1 explains that the data is transmitted from one computer to another "over a network" by uploading the data to a server and downloading it over that network. '473 Patent 14:18-32. The complaint plausibly alleges that the previously known method in the industry for doing this required hardware and physical servers. *See* Compl. ¶¶ 23-24. By teaching the method of transmitting the data without the servers and so implementing a method new and different from what was known in the industry, Claim 1 transforms the abstract idea of data transmission into a patent-eligible invention. *See CosmoKey*, 15 F.4th at 1097; *BASCOM Glob.*, 827 F.3d at 1349. The inventive concept is therefore the use of network protocols and data slicing and matching where previously only hardware was used; the inventive concept is not the abstract idea itself of data transmission. *See* Mot. 15:10-11; Repl. 10:8-11:9.

Relatedly, I am not persuaded by Amazon's argument that the patent is not inventive

because it only uses known technology. *See* Mot. 15:3-16:12. The use of known technology—including network and internet protocols—in a novel way to make the data transmission more accessible and less expensive *is* the objective of the patent. Implementing known or conventional technologies in a "non-conventional and non-generic" way can constitute an inventive concept. *BASCOM Glob.*, 827 F.3d at 1350; *see also Diamond v. Diehr*, 450 U.S. 175, 188 (1981) ("[A] new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made."). Even assuming all pieces of the claim were known at the time, the combination of the pieces—including the allegedly "contrarian" use of HTTP to convey data from the server to client computer, *see* Compl. ¶ 24—provides the inventive concept here, as alleged. To the extent that Amazon argues that the pieces and steps of the claims are not inventive because they fall "exactly where those steps would logically occur in a transmission sequence," Repl. 12:3-14; Mot. 16:6-12, in this case and at this stage, that is a factual issue that I cannot resolve in Amazon's favor.

Amazon also argues that the "contrarian" use of HTTP and the achievement of real-time broadcasting without expensive hardware are not incorporated into the claims and so are not relevant or dispositive. *See* Mot. 15:13-14; Repl. 11:10-25. But both are incorporated into the specification, and the specifications inform my understanding of the claim and the technological solution. *See Mentone Sols.*, 2021 WL 5291802, at *5; *Packet Intelligence*, 965 F.3d at 1309-10. The Federal Circuit regularly looks at the claims *and* specification to assess patent eligibility. For example, in *CosmoKey*, 15 F.4th at 1098-99, the court reasoned that the claims and the specifications "recite[d] a specific improvement" to the abstract idea, emphasizing that the *specification* explained "the inventive nature" of the arrangement of steps in the claims, which "provide[d] a technical improvement over conventional . . . methods" of performing the abstract idea. Amazon's selective citation to half a sentence from *Cellspin* is not to the contrary. There, the Federal Circuit noted that district courts may look to allegations of inventiveness in a complaint, even if they do not specifically cite the specification, so long as they are not "wholly divorced from the claims or the specification." *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1317 (Fed. Cir. 2019) (citing *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121,

1128 (Fed. Cir. 2018)). The court went on to explain that "[a]s long as what makes the claims inventive is recited by the claims, the specification need not expressly list all the reasons why this claimed structure is unconventional." *Id.* Indeed, this case stands for the opposite proposition that Amazon cited it to support, in that it shows that allegations of inventiveness in the complaint, specification, and claim can all inform the decision on this motion.

Accordingly, even if the claim is directed to an abstract idea at *Alice* step one, the inventive concept of using network protocols and data slicing and matching to perform the data transmission sufficiently transforms the claim at *Alice* step two. The defendant's motion is DENIED on this basis.

**CONCLUSION**

For those reasons, the motion is DENIED.

**IT IS SO ORDERED.**

Dated: January 29, 2024

William H. Orrick
United States District Judge

United States District Court
Northern District of California