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17 **UNITED STATES DISTRICT COURT**
18 **NORTHERN DISTRICT OF CALIFORNIA**

19
20 WITHROW NETWORKS, INC.,

21 Plaintiff,

22 vs.

23 GOOGLE, LLC and YOUTUBE, LLC,

24 Defendants.
25
26
27
28

Case No. 5:24-CV-3203

**PLAINTIFF WITHROW NETWORKS,
INC.'S OPPOSITION TO DEFENDANTS'
MOTION TO DISMISS COMPLAINT**

Date: October 3, 2024
Time: 10:00 a.m.
Location: Ctrm 8, 4th Floor
Judge: Hon. P. Casey Pitts

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Cases

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MEMORANDUM OF POINTS AND AUTHORITIES

I. INTRODUCTION

Defendants challenge the validity of U.S. Patent No. 10,771,849 (the “’849 Patent”), arguing that representative Claim 1 merely pertains to “transmitting data on computers” and lacks any innovation. Motion to Dismiss (Dkt. No. 35, “Mot.”) at 1. That is an erroneous and self-serving oversimplification of the patent.

The ’849 Patent solved a vexing problem in wireless streaming technology. At the time, the quality of mobile streaming was highly susceptible to (a) varying network conditions, and (b) differences in device hardware capabilities. ’849 Patent, at 1:13-20.¹

Claim 1 is directed to client-centric processing and playback of segmented multimedia on mobile devices over wireless networks. It is neither abstract, nor its elements merely functional. The invention addressed the aforementioned problems through a series of interlocking and contrarian elements centered on a client device (groundbreaking at the time), such that: (a) audio and video is received and sliced into segments at a specified data rate, whereby each segment is associated with parameters describing the characteristics and location of the segment with which it is associated, (b) thereby permitting the use of file-based internet protocols; (c) so a client media player can select the most appropriate stream segment, and (d) decode for playback in a manner that minimizes computational overhead. These elements form what is now called Adaptive Multi-Bit Rate (“ABR”) streaming, which is the foundation to all modern media broadcasts over the internet. *See, e.g.*, Dkt. No. 1 (“Compl.”) at ¶ 8. As such, the ’849 Patent predates the two technologies at issue in this litigation, MPEG-Dynamic Adaptive Streaming over Hyper Text Transfer Protocol (HTTP) (“MPEG-DASH”) and HTTP Live Streaming (“HLS”). *Id.* at ¶ 26.

Thus, Claim 1 teaches a unique arrangement of elements that tangibly improves streaming by solving critical problems in the computational arts. Under both *Alice* Step One and Step Two, Claim 1 is patent-eligible, and the Court should deny Defendants’ Motion.

¹ Hereinafter, citations to the ’849 Patent are to column: line number-range (c:xx-yy).

1 **II. BACKGROUND**

2 The '849 Patent teaches a "client centric streaming approach" for "provid[ing] smooth ...
3 video to mobile devices across the Internet" in part by "using dynamic adaption of different media
4 quality levels." *Id.* at ¶¶ 8, 55. "That is, [it] . . . provide[s] an improved picture even in the presence
5 of fluctuating network conditions" (*id.*) across devices with diverse capabilities, by teaching the
6 selection and playback of segmented media files based on client conditions. *Id.* at ¶¶ 8-9. It also
7 minimizes the labor-intensive computational requirements of the decoding process. *Id.* ¶¶ 9, 14.

8 **A. Historical Streaming Problems**

9 At the time of the '849 Patent's 2005 filing date priority, the state of the art was very
10 different. Streaming multimedia to mobile devices suffered from "sub-optimal playback," (*id.* at ¶
11 6), *e.g.*, popping sounds, black screens, or other artifacts that ruined the user experience. *Id.* at ¶
12 58. Quite simply, playback was not smooth. *Id.* at ¶ 1. This poor mobile streaming experience was
13 due to the confluence of three disadvantageous technical paradigms: (1) varying network
14 conditions, (2) differing hardware capabilities, and (3) a server-oriented streaming architecture.

15 First, wireless devices could not account for varying network conditions and were
16 "constrained by existing wireless bandwidth." 1:14-15. Thus, changes in available data capacity
17 (*e.g.*, bandwidth), (Compl. at ¶ 2), resulted in networks with "very high latency" (*i.e.*, delay). 3:46-
18 47. The prior art media systems included: (1) "[b]it streaming [which was] the standard method of
19 transmitting audio or video to cell phones," but required "bits [to be] buffered and then decoded";
20 (2) downloading "entire video files"; or (3) downloading only a portion of a large file "to a point
21 where" playback could begin. 2:19-24. Options (2) and (3) took significant time and wasted
22 memory, and as for (1), "bit streaming in terms of audio/video content [was] usually done over a
23 non-reliable transport like UDP and require[d] a lot of error correction and duplication of content
24 (extra stream correction data)." 2:25-28. None of those methods, however, could account for
25 varying network conditions. The software at the time that made streaming possible (*i.e.*, a protocol
26 such as Real Time Messaging Protocol ("RTMP")) simply was not:

27 designed to "adapt" the size of the encoded and streamed content based on
28 the very specific conditions of a very specific client/player. Instead, there
was just "one version" of the media . . . [yet], more and more types of

1 devices were “connected,” and more and more environments were being
2 used for playback.

3 Compl. at ¶ 4 (quoting Christian Pillsbury, *Gone in a Flash: a brief history of HTTP Adaptive*
4 *Streaming*, MUX (Oct. 10, 2022) (emphases added)).

5 Second, unlike the generally homogenized and relatively powerful desktop computers (*id.*
6 at ¶ 52), the plethora of mobile device designs presented another challenge. *Id.* at ¶ 3. Because
7 each mobile device “had its own technological needs and capabilities, such as different screen
8 sizes, resolutions, and processor limitations,” streaming had to “target the least common
9 denominator in terms of hardware and bandwidth.” *Id.* This meant streaming in a single low-
10 quality level. *Id.* As a result, “high-end devices fail[ed] to exercise their full streaming potential,
11 and the oldest basic phones possibly receiv[ed] merely a black screen.” *Id.* at ¶ 6. Hardware
12 limitations, such as “slow CPUs, high memory latencies, slow drawing capabilities and the absence
13 of YUV to RGB conversion in the hardware,” limited mobile streaming 1:16-20. Indeed, “most
14 cell phones [could not] support multimedia playback because they [we]re only capable of
15 supporting one or a few concurrent processing threads.” 1:35-38. The ’849 Patent recognized the
16 need for “platform independent” decoders and players, (2:5-6 and 13-15), such that playback could
17 be “hardware-independent and operating system independent.” 4:46-47.

18 A third problem was that mobile device streaming “centered on a server monitoring and
19 controlling the streaming process.” Compl. at ¶ 54. “This model, where the server pushed data to
20 the client, required server management of the selected data stream and, by nature, resulted in a
21 more complex architecture as the server must store the state of each stream.” *Id.* Server-based
22 streaming architectures were thus complex, data intensive, expensive, and saddled with additional
23 unnecessary functions. *Id.* at ¶ 5.

24 **B. The ’849 Patent Solved Key Problems in the Streaming Computational Arts
– Problems That Defendants Struggled to Overcome.**

25 The ’849 Patent solved key computational arts problems through its teachings pertaining
26 to mobile client-driven HTTP ABR streaming. It is well documented that “there was nothing that
27 even remotely resembled a ‘stream’ in HTTP in 2008, let alone anything that was designed
28 specifically to help with streaming media.” *Id.* at ¶ 22 (quoting Christian Pillsbury, *Gone in a Flash:*

1 *a brief history of HTTP Adaptive Streaming*, MUX (Oct. 10, 2022) (emphases added)). In 2009 (four
 2 years after the '849 filing based priority date), Defendants embarked on a multi-year project to
 3 address issues that had plagued their streaming systems—issues resolved by the '849 Patent years
 4 earlier. Code named “Sliced Bread,” Defendants proclaimed at the 2013 Google I/O conference
 5 that “The New World” of streaming had arrived. *Id.* at ¶ 23. Despite Defendants’ formidable
 6 technical might, it “took [them] . . . 4 years [for this project] from start to finish more or less – [and
 7 they] spent months finding bugs and . . . launching experiments and trying to figure out where all
 8 the problems” were. *Id.* at ¶ 24. Instead of relying on RTMP for YouTube mobile, an older server-
 9 driven technology (*id.* at ¶ 19), Defendants would now employ segmented HTTP ABR streaming
 10 and cease “delivering video in giant loaves of bread.” *Id.* at ¶ 23. Employing HTTP meant these
 11 segments had to be files. 7:45–48. And to fully exploit the benefits of an ABR system, streaming
 12 had to be controlled by the client, not media server. This eureka moment occurred for Google at
 13 the 2013 I/O conference, where it asserted: “Dumber Servers, Smarter Clients.” Compl. at ¶ 56.

14 Defendants’ new ABR system solved another key streaming issue: time alignment. *Id.* at ¶
 15 57. Switching between quality levels resulted in video artifacts and audio degradation (*id.* at ¶ 58)
 16 from the misalignment of video segments. Defendants’ solution was: first, encode all the data to
 17 make it time-aligned, and then jump between quality levels at key locations thereby providing a
 18 fluid broadcast. *Id.* at ¶ 59. This technique, new to Defendants, was disclosed in the '849 Patent
 19 nearly eight years earlier. *Id.* at ¶ 60; Claim 4.

20 **C. The '849 Patent Teaches How to Perform Client-Centric Streaming.**

21 Instead of a dedicated media server controlling audio and video streams, the client-centric
 22 approach allows the client (*i.e.*, mobile device) to dictate which files it receives—improving
 23 scalability and efficiency because “the client has the best view of network conditions.” *Id.* at ¶¶
 24 54–56 (quoting Mark Watson, *HTTP Adaptive Streaming in Practice*, ACM MMSys 2011, at 8).

25 Claim 1 explicitly teaches how to achieve fluid, high-quality mobile streaming through
 26 concrete and unconventional client-centric steps, both alone and in their recited combination:

27 A method comprising:

28 [a.i] receiving audio and video segments encoded in a digital encoding format and

1 with an encoding rate; [a.ii] wherein said audio and video segments are associated
2 with object parameters and supplied host path identification to form multimedia
objects;

3 [b.i] requesting by a multimedia player, transmission of said multimedia objects;
4 [b.ii] wherein said multimedia objects are located using http and received by said
multimedia player from servers using a wireless connection

5 [c.i] playing back received multimedia objects by the multimedia player, [c.ii]
6 wherein the multimedia player is configured to play multimedia objects in a
sequence such that fluidity, video quality and audio quality are maintained by
7 selecting a plurality of said multimedia objects that reflect available network
bandwidth, [c.iii] autonomously adjusting said selection and playback according to
8 the multimedia object parameters and supplied host path identification, and by

9 [d] utilizing optimized decoding processes to maintain quality playback.

10 19:19-39. This claim teaches how to achieve fluid, high-quality mobile streaming by: (a)
11 employing file-based protocols (*e.g.*, HTTP); (b) which enable the use of client driven playback
12 instead of relying on complex server-driven streaming solutions; (c) resulting in streams tailored
13 to a client device in order to account for (i) varying network conditions, and (ii) the specific
14 capabilities of each user device; and (d) optimized so as to lessen the otherwise labor intensive
15 process of media decoding. In summary, this claim provides improved wireless streaming.

16 ***Element [a.1]: “receiving audio and video segments encoded in a digital encoding***
format and with an encoding rate”

17 This step begins explaining how to provide HTTP ABR to mobile devices. The client
18 receives an encoded audio and video stream with two specific requirements. First, the stream must
19 be “discretely” segmented (7:63-64, “split according to a specified interval”), which is the opposite
20 of the prior art’s continuous bit streaming method. *See* 3:7-9 (“The multimedia object creator
21 produces discrete multimedia objects from video and audio segments of a continuous stream.”
22 (emphasis added)).² Because the patented streaming method is based on HTTP (Claim 1, 19:25-
23 28), such segments could not be mere “data packets,” as in the prior art. Compl. at ¶ 11. Instead,
24 they were required to be segmented files. *See* 7:45-37 (“The transport mechanism for multimedia
25 objects is assumed to be HTTP . . . however, other protocols which access content through file and
26

27
28 ² All emphasis is added unless otherwise specified.

1 directory structures could be used.”); *see also* Claim 2 (“The method of Claim 1, wherein the
2 transmission of the multimedia objects is carried out by protocols that can serve files in a
3 directory.”).

4 Second, Claim 1 achieves fluid, high-quality ABR streaming through its teaching that the
5 stream has an encoding rate. For multimedia streaming, the encoding rate is of key importance
6 because it initiates the pace at which a client device receives media. *See* Claim 1 (“ . . . receiving
7 audio and video signals . . . with an encoding rate . . . ”); 3:41-43 (referencing in the context of an
8 object parameter, the “sample rate” of a data stream).

9 ***Element [a.ii]: “wherein said audio and video segments are associated with object
10 parameters and supplied host path identification to form multimedia objects”***

11 Next, multimedia objects are created from an association between segments and (a) object
12 parameters and (b) a supplied host path identification. Object parameters pertain to the qualities of
13 the stream, including size of visual frame, sample rate, etc. 3:41-43. A “host path” can include a
14 Uniform Resource Locator (“URL”). 6:51-52 (“<transport>:/<host>/<path>”). During the
15 encoding process, object parameters and a host path identification are combined with the
16 segmented file to form a multimedia object. 6:32-37; *see also* ’849 Patent Fig. 2.

17 The encoded information results in a unique and concrete data structure that enables
18 streaming with the then-contrarian use of file-based stateless HTTP servers. *See* Compl. at ¶¶ 10-
19 11. The specification of the ’849 Patent illustrates an example of such a data structure:

20 Supplied Identification for MultimediaObjects:
21 <transport>:/<host>/<path>/
22 <MOSName><Delim><MOCCount>
23 Computed Identification for each multimedia object based on Supplied
24 Identification:
25 <SuppliedID>/
26 <MOSName>.<MOSeqNum><Delim><MOType>
27 <transport>: protocol used to transmit multimedia objects
28 <host>: Host content servers or serving the multimedia objects directly to
mobile clients
<path>: Path to the multimedia object directory
<MOSName>: Name of the multimedia object sequence
(perhaps the name of a broadcast)
<MOCCount>: Number of multimedia objects (Integer greater than zero)
<MOSeqNum>: The multimedia object's sequence number

(Integer greater than zero, less than or equal to MOCCount)

<Delim>: The delimiting character

<MOType>: encoding type e.g. mp4

6:51-7:3 (element numbers removed for clarity).

Together, “files,” “encoding rate,” and “multimedia objects” serve as the predicate for the client player’s selection and request of an appropriate media stream segment.

Elements [b.i and b.ii] “requesting by a multimedia player, transmission of said multimedia objects wherein said multimedia objects are located using http and received by said multimedia player from servers using a wireless connection”

In elements b.i and b.ii, the segmented files encoded as multimedia objects from a.i and a.ii are located using HTTP over a wireless connection. Notably, nothing like HTTP ABR existed to solve the numerous problems then-present with mobile media streaming. *See supra* Section II.B. (e.g., latency, user experience, and architectural problems); Compl. at ¶ 22. Additionally, this element confirms the interlocking steps of a.i and a.ii because HTTP must employ segmented files. HTTP is pertinent to this invention in that it allows for client control of the streaming process (*supra* at Section II.C.), which Defendants concede was a problem they did not address until 2013.

Elements [c.i, c.ii, and c.iii] “playing back received multimedia objects by the multimedia player, wherein the multimedia player is configured to play multimedia objects in a sequence such that fluidity, video quality and audio quality are maintained by selecting a plurality of said multimedia objects that reflect available network bandwidth, autonomously adjusting said selection and playback according to the multimedia object parameters and supplied host path identification, and by”

“[P]laying back received multimedia objects by the multimedia player, wherein the multimedia player is configured to play multimedia objects in a sequence” again illustrates how the ’849 Patent enabled the use of HTTP for streaming purposes. Prior to the ’849 Patent, mobile streaming systems “centered on a server monitoring and controlling the streaming process.” Compl. at ¶ 54. These servers and clients were highly specialized and “were inherently and deeply session based and stateful between client and server.” *Id.* This architecture was required because the packetized bit stream data had to be streamed sequentially, such that packet 3 followed packet 2, and 2 followed 1. Monitoring the transmission and reception of packets ensured that video would play sequentially. The stateless protocols employed by the ’849 Patent, such as HTTP (7:45-37; Compl. at ¶ 11), do not track the order in which data is received. Thus, if three data elements are

sent over the internet (1, 2 and 3), they could be received in the order 2, 3, and 1, for example. For that reason, the '849 Patent teaches that the device player be "configured to play multimedia objects in a sequence," wherefore that configuration is associated with an index as per the <MOSeqNum> field. 6:66-67; *see also* Section II.C.2, *supra* (citing 6:51-7:3 and describing the unique data structure for Supplied Identification for Multimedia Objects).

The remainder of this element introduces the concept of ABR:

playing back received multimedia objects . . . such that fluidity, video quality and audio quality are maintained by selecting a plurality of said multimedia objects that reflect available network bandwidth, autonomously adjusting said selection and playback according to the multimedia object parameters and supplied host path identification.

Media fluidity and quality are maintained by the client player through references to: (1) available network bandwidth; and (2) multimedia object parameters. To overcome bandwidth limitations, media is streamed in multiple quality levels. *See* 14:7-12 ("This process encodes a Supplied Identification to each multimedia object to identify the . . . number of objects of a *particular* multimedia stream."); *see also* 3:18-20 ("the mobile client will . . . interact with any given media sequence *on a per object basis*."). Thus, object parameters (*e.g.*, data rate or size of visual frame) are compared to bandwidth in conjunction with the location of the files (*e.g.*, URL) to stream the media with the quality level being adjusted based on bandwidth (*e.g.*, lower bandwidth results in a lower data rate, a lower visual frame, or both).³

Element [d] "utilizing optimized decoding processes to maintain quality playback"

The last element of Claim 1 pertains to "playing back received multimedia objects . . . [by] autonomously adjusting said selection and playback . . . utilizing optimized decoding processes to maintain quality playback," and is an important element for overcoming the limited processing power of mobile devices at the time of the invention.

The '849 Patent describes various concrete examples of optimized methodologies over

³ The segmentation from step [a.i] also contributes to fluidity. Without discrete segmentation, it would not be feasible to switch between different streams multimedia objects (*e.g.*, quality levels). Fig. 3a; 7:63-64 ("split according to a specified interval"); 3:17-20 ("Multimedia objects are discrete, and . . . the mobile client will have the opportunity to interact with any given media sequence on a per object basis.").

1 nearly four and a half dense pages. 9:63-18:54. For instance, below is an excerpt of steps describing
 2 media decoding using an Inverse Modified Discrete Cosine Transform:

3 [1] The $(N/2)$ input spectral coefficients are converted into
 4 complex numbers and stored into an array C of size $(N/4)$.
 5 There are many approaches to this step, however, the
 6 approach taken in the described implementation pairs coefficients
 7 with one coefficient becoming the real component
 8 and one becoming the imaginary component of a complex
 9 number. The following pseudo code describes this step:

```
10 for (n = 0; n < N/4; n++) {
11   Re(C[n]) = X[N/2 - 2*n];
12   Im(C[n]) = X[n];
13 }
```

14 [2] This result is then multiplied with scaled complex
 15 numbers on the unit circle yielding an array of size $N/4$. This
 16 step is described with the following pseudo code:

```
17 for (n = 0; n < N/4; n++) {
18   Re(Z) = Sqrt(2/N) * cos(2*Pi*(n + 1/8) / N)
19   Im(Z) = Sqrt(2/N) * sin(2*Pi*(n + 1/8) / N)
20   Re(C[n]) = Re(C[n]) * Re(Z) - Im(C[n]) * Im(Z);
21   Im(C[n]) = Re(C[n]) * Im(Z) + Im(C[n]) * Re(Z);
22 }
```

```
23 for (k=1; k < N/8; k+=2) {
24   x[2*I] = Im(C[N/8+I]);
25   x[2*I+1] = Re(-C[N/8-1-I]);
26   x[2*I+2] = Im(C[N/8+1+I]);
27   x[2*I+3] = Re(-C[N/8-2-I]);
28   x[2*I+N/4] = Re(C[I]);
29   x[2*I+N/4+1] = Im(-C[N/4-1-I]);
30   x[2*I+N/4+2] = Re(C[I+1]);
31   x[2*I+N/4+3] = Im(-C[N/4-2-I]);
32   x[2*I+N/2] = Re(C[N/8+I]);
33   x[2*I+N/2+1] = Im(-C[N/8-1-I]);
34   x[2*I+N/2+2] = Re(C[N/8+1+I]);
35   x[2*I+N/2+3] = Im(-C[N/8-2-I]);
36   x[2*I+N/2+N/4] = Im(-C[I]);
37   x[2*I+N/2+N/4+1] = Re(C[N/4-1-I]);
38   x[2*I+N/2+N/4+2] = Im(-C[I+1]);
39   x[2*I+N/2+N/4+3] = Re(C[N/4-2-I]);
40 }
```

16:25-40

16:65-17:16

13 One area for optimization pertained to low-level microprocessor computations.
 14 Specifically, “[m]ost mobile devices d[id] not allow floating point computations, and of those that
 15 d[id] allow floating point, it [wa]s usually slow.” 16:45-46. Floating point calculations are those
 16 performed using numbers with a decimal point (*e.g.*, 3.14). Thus, while using the digits to the right
 17 of the decimal point provided a more exact calculation, decoding them was cost prohibitive (in
 18 terms of computational power) for mobile devices. *See* 1:49-52 (“Decoders for complex video
 19 codecs . . . require . . . fast processing.”). Software pertaining to media compression (*e.g.*, “codecs”)
 20 required taxing floating point computations such as when performing a Discrete Cosine Transfer
 21 (“DCT”) function. In fact, “[o]ne of the most processing intensive steps of the decoding process
 22 occurs during the IDCT [‘Inverse DCT’] step.” 12:60-61.

23 The ’849 Patent provided a unique solution. It optimized the decoding of DCT (namely,
 24 the IDCT process) through the implementation of simple integers (*e.g.*, 1, 2, 3, . . .) to approximate
 25 the more exact floating-point numbers to which they correspond. “The use of an effective integer-
 26 based algorithm [was] an absolute requirement when the decoding occur[ed] on constrained
 27 devices.” 12:61-63. In December 2005, this optimization caught the attention of ARM Ltd., the
 28 primary microprocessor manufacturer for mobile phones, which acknowledged the invention’s ability

1 to provide true MPEG4 (and for audio true AAC) decoding for mobile clients and its “*unique*”
 2 adaptive rate media object transmission model. Compl. at ¶ 14. Thus, the largest mobile OEM
 3 hardware supplier confirmed that Withrow’s technology was non-conventional.

4 **III. LEGAL STANDARD**

5 **A. Motion to Dismiss Under Rule 12(b)(6)**

6 In considering a motion to dismiss under Rule 12(b)(6), “the Court must ‘accept all factual
 7 allegations in the complaint as true and construe the pleadings in the light most favorable’ to the
 8 non-moving party.” *Entangled Media, LLC v. Dropbox Inc.*, No. 23-CV-03264-PCP, 2024 WL
 9 575277, at *3 (N.D. Cal. Feb. 13, 2024) (J. Pitts) (quoting *Rowe v. Educ. Credit Mgmt. Corp.*, 559
 10 F.3d 1028, 1029–30 (9th Cir. 2009)). Patent eligibility can only be “determined on the pleadings .
 11 . . . when there are no factual allegations that, when taken as true, prevent resolving the eligibility
 12 question as a matter of law.” *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007 (Fed.
 13 Cir. 2018). Additionally, “factual disputes about whether an aspect of the claims is inventive may
 14 preclude dismissal.” *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1318 (Fed. Cir. 2019).

15 **B. Patent Eligibility Under 35 U.S.C. § 101**

16 A patent may be obtained for “any new and useful process, machine, manufacture, or
 17 composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. However,
 18 exceptions exist for “[l]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. Pty.*
 19 *Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). “A patent,” however “is ‘not rendered ineligible
 20 . . . simply because it involves an abstract concept.’” *Entangled*, 2024 WL 575277, at *3 (quoting
 21 *Alice*, 573 U.S. at 217). Courts must “tread carefully in construing this exclusionary principle lest
 22 it swallow all of patent law.” *Alice*, 573 U.S. at 217 (citing *Mayo Collab. Servs. v. Prometheus*
 23 *Labs., Inc.*, 566 U.S. 66, 71 (2012)).

24 The Supreme Court has established a two-step framework for assessing patent eligibility.
 25 First, a court must “determine whether the claims at issue are directed to a patent-ineligible
 26 concept,” like an abstract idea. *Alice*, 573 U.S. at 217. The “relevant inquiry is ‘whether the claims
 27 in [the asserted patent] focus on a specific means or method that improves the relevant technology
 28 or are instead directed to a result or effect that itself is the abstract idea and merely invoke processes

1 and machinery.” *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1151 (Fed. Cir.
 2 2019) (quoting *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir.
 3 2016)). Courts “look at the focus of the claimed advance over the prior art to determine if the
 4 claim’s character as a whole is directed to excluded subject matter.” *Id.* at 1149 (cleaned up).

5 “In cases involving software-based improvements to computer technology, the Court’s
 6 inquiry at *Alice*’s first step is to ask ‘whether the focus of the claims is on the specific asserted
 7 improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract
 8 idea’ for which computers are invoked merely as a tool.” *Entangled*, 2024 WL 575277, at *5
 9 (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016)). The Federal
 10 Circuit has “routinely held software claims patent eligible under *Alice* step one when they are
 11 directed to improvements to the functionality of a computer or network platform itself.” *Uniloc*
 12 *USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1306–07 (Fed. Cir. 2020) (citing *Customedia*
 13 *Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364 (Fed. Cir. 2020) and *Finjan, Inc. v. Blue*
 14 *Coat Systems, Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018)). “If the patent is *not* directed to a patent
 15 ineligible concept, the inquiry ends.” *Entangled*, 2024 WL 575277, at *5 (emphasis in original).

16 If the Court determines that the claims are directed to an abstract idea, it moves to *Alice*
 17 Step Two and “consider[s] the elements of each claim both individually and ‘as an ordered
 18 combination’ to determine whether the additional elements ‘transform the nature of the claim’ into
 19 a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 66, 79, 78). “Step
 20 two is ‘a search for an inventive concept—i.e., an element or combination of elements that is
 21 sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the
 22 ineligible concept itself.’” *CosmoKey Sols. GmbH & Co. KG v. Duo Sec. LLC*, 15 F.4th 1091,
 23 1096 (Fed. Cir. 2021) (quoting *Alice*, 573 U.S. at 217–18) (cleaned up).

24 Importantly, patents are presumed valid (35 U.S.C. § 282(a)), and the burden of
 25 establishing invalidity by “clear and convincing evidence” is on the party asserting it. *Microsoft*
 26 *Corp. v. i4i Ltd. P’ship.*, 564 U.S. 91, 95 (2011).

27 **IV. THE ASSERTED CLAIM IS PATENT-ELIGIBLE.**

28 **A. *Alice* Step 1: The Asserted Claim Is Directed To A Nonabstract Technological**

1 **Improvement In Multimedia Streaming To Mobile Devices.**

2 Claim 1, as contextualized by the specification, is directed to an improvement in
3 multimedia streaming. Specifically, it is directed to a client-driven streaming player that uses
4 network protocols that utilize discrete media segments (instead of continuous packetized
5 bitstreams) to enable the autonomous adjustment of streamed media to account for varying
6 bandwidth and hardware limitations. It is not, as Defendants assert, directed merely to the “abstract
7 idea of transmitting and playing back multimedia.” Mot. at 5.

8 ***I. Claim 1 Is Directed To Specific Improvements To Computer Functionality.***

9 Under Step One of *Alice*, the relevant inquiry is whether the claims “focus on a specific
10 means or method that improves the relevant technology or are instead directed to a result or effect
11 that itself is the abstract idea.” *Koninklijke*, 942 F.3d at 1151 (quoting *McRO, Inc.*, 837 F.3d at
12 1314). The Court “‘applies a stage-one filter to claims, considered in light of the specification,
13 based on whether ‘their character as a whole is directed to excluded subject matter.’” *BSD Crown,*
14 *Ltd. v. Twitch Interactive, Inc.*, No. 3:23-CV-00057-WHO, 2024 WL 332887, at *5 (N.D. Cal.
15 Jan. 29, 2024) (quoting *Enfish*, 822 F.3d at 1335) (emphasis in original).

16 The focus of Claim 1 is on an improvement to multimedia streaming to mobile devices—
17 not on economic or other tasks for which a computer is used in its ordinary capacity.” *Cf., Enfish*,
18 822 F.3d at 1336. The relevant technology is multimedia streaming to mobile devices (*Koninklijke*,
19 942 F.3d at 1151), and the patent’s focus improves on the prior art with its method for fluid
20 streaming. *See TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020) (recognizing that
21 the court looks to what the patent asserts to be the focus of the claimed advance over the prior art).
22 As the Complaint and the ’849 Patent make clear, the prior art suffered from playback artifacts,
23 (see Compl. at ¶¶ 2, 4, 58; 1:14-15, 2:19-28, 3:4-47), expensive servers due to stateful protocols,
24 (see *id.* at ¶¶ 5, 54), and problems related to the diversity of mobile devices on the market. *See id.*
25 at ¶¶ 3, 6, 52; 1:16-20, 1:35-38, 2:5-6, 23-25; 4:46-47.

26 The invention’s technological solution includes non-conventional improvements for
27 maintaining stream quality. *See* Section II.C, *supra*. It is not a continuous bitstream, as Defendants
28 suggest. Mot. at 5. Instead, Claim 1 teaches the transmission of discrete segments (“the multimedia

object creator produces discrete multimedia objects,” 3:7-9), which specifically are files (“the transport mechanism for the multimedia objects is assumed to be HTTP . . .” (3:30-34)), all under the control of the client (“A java applet object player . . . interprets and decodes the multimedia objects as they are received” (’849 Patent Abstract)), wherefore, “[t]he central indexing host 17 accepts requests from clients 8 for multimedia content 21” (9:37-38), so as to account for variable bandwidth and device diversity (Compl. at ¶¶ 8-9, 12-13). The then-conventional streaming technologies did not address these issues because mobile device streaming “centered on a server monitoring and controlling the streaming process.” *Id.* at ¶ 54. Only in 2011, did the industry begin coopting the teachings of the ’849 Patent and reject server-based systems because the “client has the best view of network conditions.” Compl. at ¶ 56 (*quoting* Watson, *supra*, at 8). In 2013, latecomer Google finally identified the importance of a client-driven system. *Id.*

In client-driven streaming, decoding the streamed media files posed another problem. Mobile devices did not have adequate processing capabilities to decode media streams. The ’849 Patent solved this last issue by teaching optimized decoding processes, such as an integer based IDCT, to extract the media data but within the confines of mobile device hardware. Section II.C, *supra* (Element d). Defendants’ analogy to *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017) is inapplicable. Mot. at 6. There, the Federal Circuit was presented with an undifferentiated encoding and decoding process that did not “improve[] the functioning of a computer,” and instead claimed an ‘abstract idea’ for ““which computers are invoked merely as a tool.”” *Id.* (citations omitted). Here, the ’849 Patent describes the innovative concept of optimized decoding across nearly four and a half pages of text, including pseudo-code (9:63-18:54)—an improvement confirmed as “unique” by ARM Ltd. (Compl. at ¶ 14), a leading mobile OEM microprocessor manufacturer.

Defendants fail to address the benefits described (and achieved) by the ’849 Patent or those alleged in the Complaint. Mot. at 8-9. Instead, Defendants misdirect by asserting that Claim 1 “is nothing more than claiming the abstract idea of ‘leveraging certain data and data structures to improve streaming technology’ itself.” Mot. at 8 (*quoting Helios Streaming, LLC v. Warner Bros. Discovery*, No. 8:23-CV-01575-MCS-MAA, 2024 WL 1824996, at *8 (C.D. Cal. Jan. 30, 2024)).

1 Claim 1, however, is not directed to an abstract idea. Prior to the patent, streaming architecture for
 2 mobile devices required complex and expensive stateful servers to control the flow of data. *See*
 3 Section II.A, *supra*. These systems either used bit streaming in conjunction with primitive
 4 protocols such as RTMP, or merely downloaded a single large file to the client. Both approaches
 5 were plagued with a poor user experience, including unwanted delay and playback artifacts. *Id.*
 6 These problems were exacerbated by the significant diversity and limited resources of mobile
 7 devices (as compared to, *e.g.*, desktop computers), which forced streaming servers to curtail their
 8 streams to a quality consistent with the lowest common denominator—leaving those users with
 9 better network conditions or more powerful mobile devices dissatisfied. *Id.* Indeed, Defendants
 10 acknowledged the technological improvements (and the difficulty of achieving them) when they
 11 introduced their infringing products years later. *See* Section II.B, *supra*.

12 **2. Considered in Light of the Specification, Claim 1 Recites More Than**
 13 **Functional Language, Explaining How to Achieve the Desired Results.**

14 Defendants assert Claim 1 is merely functional by improperly oversimplifying and
 15 generalizing the claim to four basic steps: “(1) receiving encoded multimedia segments [a.i], (2)
 16 requesting transmission of multimedia [b.i], (3) playing back the received multimedia [c.i], and
 17 (4) using optimized decoding processes to maintain quality playback [d].” Mot. at 5. Defendants
 18 allege these four simplified claim elements collapse into the single abstract concept of “nothing
 19 more than following the process of ‘bit streaming.’” *Id.*

20 Defendants’ analysis should be rejected. The Court must avoid overgeneralizing the claim.
 21 *BSD*, 2024 WL 332887, at *5 (quoting *TecSec*, 978 F.3d at 1292). Indeed, Defendants fail to
 22 substantively analyze numerous claim elements, such as [a.ii], [b.ii], and [c.ii and c.iii]. The
 23 Federal Circuit has warned about this kind of analysis: “describing the claims at such a high level
 24 of abstraction, untethered from the language of the claims all but ensures that the exceptions to §
 25 101 swallow the rule.” *Enfish*, 822 F.3d at 1337. Here, Defendants’ assertion that Claim 1 is
 26 directed to bit-streaming contravenes the teachings of the ’849 Patent, which explicitly rejects “bit
 27 streaming” data packets in view of “discretely” segmented files. *Supra* at Section II.C.[a.i].

28 The desired result of the ’849 Patent is to deliver client-selected multimedia to mobile

1 devices such that the stream is fluid. Claim 1, in light of the specification, teaches how to achieve
2 the result: encode audio and video data into discrete files associated with object parameters (*e.g.*,
3 size of visual frame and sample rate) and a URL (collectively, a multimedia object), which are
4 then requested by the client using the HTTP network protocol at a quality level based on the client
5 device's hardware specifications and bandwidth constraints, for eventual optimized decoding
6 (such as using an integer based DCT). *See* Section II.C, *supra*.

7 Defendants' conclusory argument—that Claim 1 does not teach how to achieve the result,
8 what the object parameters are and their relation to multimedia objects, or how optimized decoding
9 is disclosed (Mot. at 9)—results from their head-in-the-sand reading of the '849 Patent. Only by
10 excising inconvenient claim elements (*e.g.*, “receiving audio and video segments . . . with an
11 encoding rate” [a.i] and “requesting . . . multimedia objects . . . wherein said multimedia objects
12 are located using http” [b.ii]) and ignoring the teachings of the specification, are Defendants able
13 to reach the incorrect conclusion that Claim 1 is purely functional. For instance, the patent defines
14 “object parameters” as media stream qualities, such as “the size of the visual frame or the sample
15 rate of the audio stream.” 3:41-43. These object parameters determine the requested multimedia
16 object. 19:34-36. That is, the combination of the object parameters with the supplied host path
17 identification of the media segments (*i.e.*, the URL) creates “multimedia objects.” *Id.*; 6:32-37.
18 Then, because the multimedia objects are associated with URLs, the client can request them (based
19 on the client device's hardware and network connection) via HTTP over wireless networks. The
20 patent further teaches that this result is achieved using “optimized decoding processes,” which it
21 explains in depth. 9:63-18:54. More specifically and related to this litigation, it explains the
22 importance of decoding with an optimized DCT process. Section II.C.[d], *supra*.

23 Defendants appear to raise a claim construction issue; namely, the meaning of three terms:
24 “object parameters,” “supplied host path identification,” and “decoding processes.” Mot. at 9. For
25 purposes solely directed to this opposition, the meaning of “object parameters” is explained in
26 Section II.C.[a.ii]. These items are parameters of qualities associated with the video stream,
27 including size of visual frame, sample rate, etc. 3:41-43. More specifically, they can also include
28 encoding rate and codec information. Dkt. No. 1-2 (HLS Infringement Chart) at 12, 14; Dkt. No.

1 1-3 (MPEG-DASH Infringement Chart) at 10, 12. The term “host path” was also described in the
 2 Section II.C.[a.ii]. As disclosed in the patent, the multimedia objects are files, and the transmission
 3 of such data is by HTTP. *See* 3:30-34 (“[T]he transport mechanism for the multimedia objects is
 4 assumed to be HTTP . . .”). As such, host paths for HTTP are integrated into the unique data
 5 structures disclosed by the ’849 Patent: “Supplied Identification for MultimediaObjects: <
 6 transport > : // < host > / < path > / . . .” 6:51-52. Lastly, as to “optimized decoding processes,”
 7 that term is described at length in Section II.C.[d], including through the provision of pseudo-code.
 8 Thus, Defendants’ position that Claim 1 failed to explain how the invention functions, is incorrect.

9 **3. Claim 1 Is Like Claims Other Courts Have Found Patent-Eligible.**

10 Claim 1 is analogous to inventions found patent-eligible under *Alice* Step One. For
 11 instance, in *Uniloc*, the Federal Circuit held that claims including means for ““adding to each
 12 inquiry message . . . an additional data field for polling at least one secondary station”” were
 13 directed to an “improvement to computer functionality”—*i.e.*, “the reduction of latency
 14 experienced by parked secondary stations in communication systems.” 957 F.3d at 1307. The
 15 Court found pertinent that the invention “eliminates or reduces the delay present in conventional
 16 systems.” *Id.* at 1308. The recitation of “an additional data field for polling” to “each inquiry
 17 message,” coupled with well-known Bluetooth components to “reduce[] response time,” is
 18 analogous to the ’849 Patent’s use of multimedia objects and HTTP to ensure fluid streaming
 19 without dedicated equipment. *Id.*; *accord Adasa Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 909
 20 (Fed. Cir. 2022) (finding eligible a patent including “a hardware-based data structure focused on
 21 improvements to the technological process by which that data is encoded”).

22 Similarly, in *SRI Int’l, Inc. v. Cisco Systems, Inc.*, claims including a specific technique—
 23 “using a plurality of network monitors that each analyze specific types of data on the network and
 24 integrating reports from the monitors”—solved “a technological problem arising in computer
 25 networks: identifying hackers or potential intruders into the network.” 930 F.3d 1295, 1303 (Fed.
 26 Cir. 2019). The Federal Circuit disagreed that the claims were “simply directed to generic steps
 27 required to collect and analyze data,” holding instead that they “actually prevent[ed] the normal,
 28 expected operation of a conventional computer network” and ““overr[ode] the routine and

1 conventional sequence of events. . . .” *Id.* at 1304 (quoting *DDR Holdings, LLC v. Hotels.com,*
 2 *L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)). The Court reasoned that the claims were not directed
 3 to “automating a conventional idea on a computer,” but rather “improve[d] the technical
 4 functioning of the computer and computer networks by reciting a specific technique for improving
 5 computer network security.” *Id.* Here, the claims similarly improve the prior art by using a specific
 6 and unconventional method. *Cf. BSD*, 2024 WL 332887, at *9 (holding the use of “general
 7 components” at Step One does not preclude patent eligibility) (citations omitted).

8 In *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, the Federal Circuit rejected an
 9 oversimplified analogy that “an improved user interface” was nothing more than an index. 880
 10 F.3d 1356, 1362 (Fed. Cir. 2018). The Court found the claims valid because they were “directed
 11 to a particular manner of summarizing and presenting information in electronic devices.” *Id.*
 12 Namely, the claims required: (1) “an application summary that can be reached directly from the
 13 menu,” which “specif[ied] a particular manner by which the summary window must be accessed,”
 14 (2) that “the application summary window list a limited set of data,” which “restrain[ed] the type
 15 of data that can be displayed in the summary window,” and (3) “that the summary window ‘is
 16 displayed while the one or more applications are in an un-launched state,’ a requirement that the
 17 device applications exist in a particular state.” *Id.* at 1362-1363. These limitations did not use
 18 “conventional user interface methods to display a generic index on a computer,” but rather recited
 19 “a specific improvement over prior systems.” *Id.* at 1363. Similarly, Claim 1 recites a specific
 20 technique—a client-driven streaming player using network protocols that utilize discrete media
 21 segments to enable the autonomous adjustment of streamed media to account for varying
 22 bandwidth and hardware limitations—that advanced over the prior art. It does not generically
 23 claim “transmitting data on computers,” as suggested by Defendants. Mot. at 1.

24 Recently, in *BSD*, this Court considered a patent teaching a “process for real-time
 25 transmission of video and audio broadcasts using network technology,” where the object of the
 26 invention was to broadcast “using common, universally-supported Internet communications
 27 protocols” so as to use “existing server and network infrastructure.” 2024 WL 332887, at *1. Like
 28 here, the defendants argued that the claims concerned the oversimplified, abstract, and purely

functional concepts of “collecting, packaging, and transmitting data.” The Court found the defendants’ attempts to “isolate individual steps of the claim and argue that each step is abstract, functional, or overbroad” unpersuasive. *Id.* at *6. Moreover, the Court was unpersuaded that “because the claim language itself does not explain the objectives of the patent . . . [it] cannot consider those objectives when assessing the claim.” *Id.* Instead, the Court emphasized the need to read the claim “as a whole and in the context of the specification,” and “as described by . . . [the] complaint.” *Id.* *6. The Court held that the patent disclosed “how to perform the solution to the technical problems” it sought to solve. *Id.* at 8. Moreover, the Court held that even if “[i]t is true that the claim ‘involves a patent-ineligible concept’—data transmission, collection, and packaging— . . . the character of the claim as a whole is ‘directed to’ using internet protocols and data slicing to carry out that objective, thereby improving the prior art by making real-time processing possible without the expensive hardware.” *Id.* at *6 (citing *Enfish*, 822 F.3d at 1334-35 (emphases in original, citations omitted)). Here, the claims are similarly directed to using internet protocols and teach accounting for variable bandwidth by discretely segmenting data—thus achieving the objective of fluid video.

Other courts have reached similar conclusions under *Alice* Step One. In *VideoLabs, Inc. v. Netflix, Inc.*, No. 22-229, 2024 WL 2153274 (D. Del. May 14, 2024), the court upheld three analogous patents for “the provi[sion] of access to digital content for use on a wireless communication device” (*id.* at *2), “the control of the flow of content from a server to a terminal” (*id.* at *3), and “the ordering of audio within digital video content.” *Id.* at *4. Relying on *SRI*, the court held: (1) “because [the claim] describes a mechanism for tailoring content based on device capabilities and does not customize content to a user,” it is patent eligible and dissimilar from the claims in *Affinity Labs of Texas, LLC v. Amazon.com*, 838 F.3d 1266 (Fed. Cir. 2016), (*id.* at *8), (2) that “Plaintiffs have sufficiently pled that the [patent] improved on previous network architecture and improved the functioning of computers” (*id.*), and (3) that “the [patent] describes a new technique for ordering and aligning audio segments that is more efficient than prior techniques.” *Id.* at *9. Each of those reasons applies equally here.

Samesurf, Inc. v. Intuit, Inc., No. 322CV00412RSHDDL, 2023 WL 2342077 (S.D. Cal.

Jan. 10, 2023) likewise involved a similar patent—one that “us[ed] a synchronization server to administer synchronized browsing sessions in order to overcome the bandwidth and processing issues of the prior art.” *Id.* at *6. The Court concluded that “[t]he bandwidth and processing issues of the prior art methods of ‘desktop and screen sharing’ for simultaneous internet viewing are issues that exist only in the realm of computer networks and the Internet,” and “[a]s such, the asserted claims are not directed to an abstract idea.” *Id.* at *6, *8 (citations omitted).

4. *The Cases On Which Defendants Rely Are Distinguishable.*

Having overgeneralized Claim 1, Defendants then lump their simplified version of the ’849 Patent into a group of cases in which courts have held patents “covering the transmission of data on computers” ineligible under § 101. Mot. at 5-8. The patents at issue in those cases are dissimilar because the ’849 Patent (a) teaches how the invention achieves its goal of continuous multimedia streaming to mobile devices, (*see* 2:36-46) and (b) explains that it is a significant improvement over then-existing technology. *See* Section II.A-C., *supra*.

In *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, the claims required the “functional results” of “‘receiving video images,’ ‘digitizing . . . the images,’ ‘displaying one or more of the digitized images,’ ‘converting one or more of the video source images into a selected video format,’ ‘storing at least a subset of the converted images,’ ‘providing a communications link,’ ‘receiving ... a request to receive one or more specific streams of the video images,’ ‘transmitting . . . a version of one or more of the video images,’ and ‘displaying only the one or more requested specific streams of the video images.’” 60 F.4th 1349, 1357 (Fed. Cir. 2023). The Court concluded that the claims “lack[ed] ‘sufficient recitation of *how* the purported invention improve[s] the functionality’ of video surveillance systems and are ‘recited at such a level of result-oriented generality’” that they amount to a “‘mere implementation of an abstract idea.’” *Id.* at 1358 (emphasis in original).

In contrast, Claim 1 here teaches how the invention achieves its goal of multimedia streaming to mobile devices (*see* 2:36-46)—by providing an encoding rate, segmenting the audio and video data into files with associated parameters such that a client device can assess what quality level of file to request based on available bandwidth and hardware capabilities (when compared to the associated file parameters), and finally receiving the requested data and decoding

1 it, for example, using an optimized integer based DCT. *See* Section II.C., *supra*.

2 Defendants' reliance on *Helios* is also misplaced. The patents there concerned an alleged
3 improvement to minor aspects of a metadata file (known as an MPD) to improve efficiency—with
4 the claims being directed to the idea of "leveraging data to improve streaming technology." 2024
5 WL 1824996, at *6. Unlike here, the *Helios* patents were not directed to technological aspects of
6 the protocol itself, nor did they teach technological aspects of the MPD file. Instead, they merely
7 taught an improvement to that standard's data structures for the purpose of improving efficiency.
8 *See id.* at *7 ("The MPD [of *Helios*] may be an MPD of a 'Dynamic Adaptive HTTP Streaming of
9 MPEG (DASH).'"). Thus, at *Alice* Step One, the court held that the "idea of sending and receiving
10 data does not constitute patent eligible subject matter" (*id.* at *6) where "efficiency concerns,"
11 without more "is not a unique technical problem." *Id.* at *7. At *Alice* Step Two, the court observed
12 that "the question is whether the MPD revolutionized streaming technology or whether it is a
13 general or basic data organization structure" (*id.* at *8), to which it found that plaintiff did "not
14 expressly allege that the MPD is not well-understood, routine, or conventional." *Id.* at *7. That
15 assessment was fatal.

16 Defendants' other cases fare no better. For instance, in *AI Visualize v. Nuance Commc 'ns,*
17 *Inc.*, the plaintiff argued that "the claims are not directed to an abstract idea because the claims
18 require the *creation* of 'on the fly' virtual views at a client computer." 97 F.4th 1371, 1379 (Fed.
19 Cir. 2024) (emphasis in original). In finding the claims abstract, the Court noted that "the claim
20 language makes clear that virtual view 'creation' is achieved by the manipulation of a portion of
21 the existing VVD" and that "this 'creation' of a virtual view from the existing VVD, recited in
22 general terms, is abstract data manipulation." *Id.* In *Cellspin*, the claims were directed to "the idea
23 of capturing and transmitting data from one device to another," not to improving data capture
24 devices and networks. 927 F.3d at 1315. The patents merely offered a way to automate a process
25 that was already being done. *Id.* at 1316. In *RecogniCorp, LLC v. Nintendo Co.*, the Court
26 considered claims for creating composite facial images and reasoned that "[a] process that started
27 with data, added an algorithm, and ended with a new form of data was directed to an abstract idea."
28 855 F.3d at 1327. In *Two-Way Media Ltd. v. Comcast Cable Commc 'ns, LLC*, the Court held that

1 the proposed construction of a term failed “to indicate how the claims are directed to a scalable
 2 network architecture that itself leads to an improvement in the *functioning* of the system,” nor did
 3 it “provide any parameters for the ‘signals’ purportedly dictating how the information is being
 4 routed.” 874 F.3d 1329, 1338 (Fed. Cir. 2017) (emphasis in original). In *Affinity Labs of Texas,*
 5 *LLC v. DIRECTV, LLC*, the Court found claims abstract where the “patent claim[ed] the function of
 6 wirelessly communicating regional broadcast content to an out-of-region recipient—not a particular
 7 way of performing that function.” 838 F.3d 1253, 1258 (Fed. Cir. 2016). In *Adaptive Streaming Inc.*
 8 *v. Netflix, Inc.*, the Court found that “the claims and written description make clear that the focus
 9 of the claimed advance is the abstract idea of format conversion . . . not any specific advance in
 10 coding or other techniques for implementing that idea; no such specific technique is required.” 836
 11 F. App’x 900, 903 (Fed. Cir. 2020). Likewise, the Court in *Cyberfone Sys., LLC v. CNN Interactive*
 12 *Grp., Inc.*, found claims ineligible because they were directed to categorical data storage, and “the
 13 idea of collecting information in classified form, then separating and transmitting that information
 14 according to its classification, is an abstract idea that is not patent-eligible.” 558 F. App’x 988, 992
 15 (Fed. Cir. 2014).

16 Unlike in those cases, Claim 1 here is not directed to the idea of, for example, data
 17 transmission, encoding and decoding, format conversion, or categorical data storage. Instead,
 18 Claim 1 is directed to an improved method for client-driven streaming. As discussed in section
 19 II.C., *supra*, the claim recites a specific, unconventional process that improved existing technology
 20 with a fundamental shift from server-based to client-based streaming—enabling scaling across
 21 numerous and diverse devices. Moreover, Claim 1 explains how the multimedia is encoded,
 22 received, requested, and transmitted using unconventional file-based protocols like HTTP to
 23 provide quality streaming without dedicated equipment. *Id.*

24 Because the ’849 Patent is directed to a non-abstract idea and explains how to achieve its
 25 desired results, the Court need not proceed to *Alice* Step Two and should deny the Motion.

26 **B. *Alice* Step 2: The Asserted Claim Includes Inventive Concepts.**

27 Even if Claim 1 were directed to an abstract idea (it is not), it remains patent eligible
 28 because it includes inventive concepts. In the fact-focused, *Alice* Step Two inquiry, “the Court

1 must consider whether the claims merely recite generic computer processes and machinery or
 2 alternatively whether the non-generic arrangement of those processes and machinery gives rise to
 3 an inventive concept. The ‘[i]nquiry therefore must turn to any requirements for how the desired
 4 result is achieved.’” *Entangled*, 2024 WL 575277, at *7 (quoting *Two-Way Media*, 874 F.3d at
 5 1339). “[A]n inventive concept can be found in the non-conventional and non-generic arrangement
 6 of known, conventional pieces.” *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827
 7 F.3d 1341, 1350 (Fed. Cir. 2016). If claims “recite a sufficient inventive concept under step two—
 8 particularly when the claims solve a technology-based problem, even with conventional, generic
 9 components, combined in an unconventional manner”—then they are patent-eligible. *Amdocs*
 10 *(Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300 (Fed. Cir. 2016) (citation omitted).

11 Additionally, “‘plausible factual allegations that the claims include inventive concepts’
 12 [are] sufficient to preclude dismissal under Rule 12(b)(6) [where] the claim language, the written
 13 description, and the . . . complaint describe[] how the patent’s particular arrangements of elements
 14 provide[] for a technical improvement over prior art.” *Entangled*, 2024 WL 575277, at *8 (quoting
 15 *Cooperative Ent., Inc. v. Kollektive Tech., Inc.*, 50 F.4th 127, 135-36 (Fed. Cir. 2022)); *see also*
 16 *BSD*, 2024 WL 332887, at *10 (“courts may look to allegations of inventiveness in a complaint,
 17 even if they do not specifically cite the specification, so long as they are not ‘wholly divorced from
 18 the claims or the specification’” (quoting *Cellspin*, 927 F.3d at 1317)).

19 Defendants’ assertion that Claim 1 “includes no element directed to any technological
 20 improvement” (Mot. at 10) is demonstrably false. The claim recites four steps with subparts
 21 describing how to implement the method to achieve fluid, high quality streaming of multimedia.
 22 “Because the [test] considers all claim elements, both individually and in combination, it is
 23 consistent with the general rule that patent claims ‘must be considered as a whole.’” *Alice*, 573
 24 U.S. at 218, n.3. The ’849 Patent does not use a computer to implement a business method or an
 25 attempt to monopolize an abstract concept, *e.g.*, “streaming.” Rather, that patent recites specific
 26 steps—contrarian at the time—to improve network technology for streaming media to, and
 27 playback on, mobile devices over wireless networks. *Supra* Section II.A and B.

28 Defendants ask the Court to focus exclusively on the hardware involved. Mot. at 10. But

1 the use of “conventional hardware technology” (*id.*) is a feature of the invention—opposite to the
 2 industry’s then-use of expensive, complex servers—and enabled greater efficiency and delivery to
 3 mobile devices with different hardware and software. Compl. at ¶¶ 10-14; *cf* *BSD*, 2024 WL
 4 332887, at *1 (describing the objective of the patent to avoid expensive hardware and instead use
 5 “common existing server and network infrastructure”). Software patents commonly use
 6 commonplace hardware, and the Court’s focus is on “whether there are arguably concrete
 7 improvements in the recited computer technology.” *Enfish*, 822 F.3d at 1339; *see also*,
 8 *Cooperative Ent.*, 50 F.4th at 135 (“useful improvements to computer networks are patentable
 9 regardless of whether the network is comprised of standard computing equipment”); *DDR*, 773
 10 F.3d at 1259 (finding eligible under *Alice* Step 2 claims that “recite a specific way to automate the
 11 creation of a composite web page” because “the claimed solution amounts to an inventive concept
 12 for resolving this particular Internet-centric problem”). Here, Claim 1 is tied to structures (e.g.,
 13 innovative data structures for use in streaming), presents no preemption concerns as it is limited
 14 to the technological environment of network media streaming, and provides explicit improvements
 15 to existing streaming functionality. *See Huawei Techs., Co, Ltd v. Samsung Elecs. Co, Ltd.*, No.
 16 3:16-CV-02787-WHO, 2016 WL 6834614, at *11 (N.D. Cal. Nov. 21, 2016) (“[The] claims are
 17 limited to the technological environment of cellular communications, and they are tied to the
 18 concrete structure of a mobile device. For these reasons, and because they do not present a risk of
 19 preemption, the claims contain enough of an inventive concept to be patent eligible.”).

20 Defendants hope the Court will isolate the individual elements of the claim without
 21 considering them in combination. Mot. at 10-11 (analyzing claim elements in isolation). But “[t]he
 22 inventive concept inquiry requires more than recognizing that each claim element, by itself, was
 23 known in the art. As is the case here, an inventive concept can be found in the non-conventional
 24 and non-generic arrangement of known, conventional pieces.” *Bascom*, 827 F.3d at 1350. The
 25 Complaint, specification, and Claim 1 make clear that the combination of claim elements is an
 26 inventive concept because it was contrarian at the time to use stateless HTTP protocol as opposed
 27 to expensive stateful servers (Compl. at ¶¶ 4, 10-11, 22, 56; 2:25-28; 19:27 (claiming “http”)) to
 28 stream data grouped as multimedia objects, with associated metadata (object parameters and URL

(6:32-37)), instead of basic data packets (Compl. at ¶ 11, 3:7-9; 19:20-24) and to allow mobile devices, each with its own distinct capabilities, to select the proper encoded video based on quality level. *Id.* at ¶ 9; 19:25-26; *see* Section II.C.5, *supra*; *see also* Compl. at ¶¶ 12-13. Indeed, under nearly identical facts, the Federal Circuit determined a complaint allegation that “using HTTP at a specific location ... was inventive” was enough to survive a Rule 12 motion. *See Cellspin*, 927 F.3d at 1318 (“We have no basis, at the pleadings stage, to say that these claimed techniques, among others, were well-known or conventional as a matter of law.”). Defendants’ argument—that “claim 1 does not recite any specialized formula or new technique for analyzing information”—ignores the well-pled Complaint allegations and thus fails at Step 2.

Further, the specification and the Complaint are full of facts and allegations making clear that the claims contain inventive concepts, including a description of the improvements over the prior art (*see* Section II.A, *supra*), Defendants’ struggles to create their allegedly infringing systems years later (*see* Section II.B, *supra*; Compl. at ¶¶ 23-28), and how the ’849 Patent changed fundamental streaming architectures. *See* Section II preamble and II.C, *supra*. “Inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.” *Bascom*, 827 F.3d at 1350 (citation omitted).

Defendants’ reliance on *Realtime Data* and *Electric Power* is misplaced. Mot. at 11. *Realtime Data* stands for the proposition that, at *Alice*’s Step Two, a claim directed to the abstract concept of data manipulation is not inventive where it “simply appl[ies] an abstract idea on generic computers with generic techniques.” *Realtime Data LLC v. Array Networks Inc.*, No. 2021-2251, 2023 WL 4924814, at * 10 (Fed. Cir. Aug. 2, 2023). In contrast, Claim 1 of the ’849 Patent does not merely claim an inventive result. *See id.* It discloses a unique approach to achieve the desired result of providing fluid and high-quality multimedia streaming on wireless devices that accounts for varying bandwidth and hardware limitations.

Similarly, Defendants rely on *Electric Power* for the proposition that limiting the claim to adaptive streaming cannot supply an inventive concept. Mot. at 11. There, the patent was directed to collecting, analyzing, and displaying information. The Court rejected the claims at issue under

1 Step Two because they did “not even require a new source or type of information, or new
 2 techniques for analyzing it[,] . . . [did] not invoke any assertedly inventive programming . . . or
 3 require any . . . non-conventional and non-generic arrangement of known, conventional pieces.”
 4 *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016).

5 In contrast, the ’849 Patent provides a new technique for streaming to mobile devices—
 6 streaming is requested by the mobile device, and multimedia objects are transmitted using HTTP.
 7 19:25-28. Claim 1 enables devices with distinct hardware and specifications to receive multimedia
 8 (19:34-37) and eases the requirements for servers and mobile devices (19:38-39). Claim 1 is much
 9 more like the claims held eligible in *DDR* because it supplies an inventive technique for streaming.
 10 *See DDR*, 773 F.3d at 1257 (finding inventive concept in modification of conventional system
 11 behind website display); *accord Valjiakka v. Netflix, Inc.*, No. 22-cv-01490-JST, 2023 WL
 12 5420225, at *7 (N.D. Cal. Aug. 22, 2023) (finding patent eligible under Step Two because “the
 13 claim necessarily requires that these [generic] components operate in an unconventional manner
 14 to achieve an improvement in [network] functionality”). As the *Electric Power* Court affirmed,
 15 “there is a critical difference between patenting a particular concrete solution to a problem and
 16 attempting to patent the abstract idea of a solution to the problem in general.” *Elec. Power*, 830
 17 F.3d at 1356. Here, the ’849 Patent claims a “specific way of enabling” smooth streaming and does
 18 not “purport to monopolize every potential solution to the problem.” *Id.*

19 **C. Alternatively, The Court Should Grant Withrow Leave To Amend.**

20 If the Court finds that the Motion should be granted, Plaintiff respectfully requests leave to
 21 amend. *See Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1127–30 (Fed.
 22 Cir. 2018) (finding abuse of discretion in denying amendments that showed the patent “improve[d]
 23 the functioning and operation of the computer itself”); Fed. R. Civ. P. 15(a).

24 **V. CONCLUSION**

25 For the foregoing reasons, Withrow respectfully requests the Court deny Defendants’
 26 Motion to Dismiss.

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