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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

REARDEN LLC, et al.,
Plaintiffs,

v.

TWDC ENTERPRISES 18 CORP., et al.,
Defendants.

Case No. 22-cv-02464-JST

**ORDER GRANTING MOTION TO
DISMISS**

Re: ECF No. 42

Before the Court is Defendants’ motion to dismiss. ECF No. 42. The Court will grant the motion.

I. BACKGROUND

This case is the latest in a longstanding controversy surrounding the ownership and use of the MOVA Contour Reality Capture program (“MOVA”). MOVA “is used to capture high-resolution 3D models of a performer’s face and facial movements as the performer’s skin moves from frame-to-frame.” Second Amended Complaint (“SAC”) ¶ 28, ECF No. 461. The 3D models are used “to create an animation of a different face with the same movements.” *Id.* This program has been used to create or enhance characters in the production of various movies, such as *The Curious Case of Benjamin Button* (2008), *Harry Potter and the Deathly Hallows, Part I* (2010), and *The Avengers* (2012). *Id.* ¶ 36.

This Court initially adjudicated a dispute between Plaintiff Rearden LLC and Shenzhenshi Haitiecheng Science and Technology Company (“SHST”) concerning the ownership of equipment and intellectual property associated with MOVA (“Ownership Litigation”). SHST is a Chinese entity associated with Digital Domain 3.0, Inc. (“DD3”), a visual effects company whose alleged conduct lies at the heart of the case at hand. *See Shenzhenshi Haitiecheng Sci. and Tech. Co.,*

1 *LTD. v. Rearden LLC* (“*SHST*”), No. 15-cv-00797-JST, 2017 WL 3446585 at *2, *7. (N.D. Cal.
2 Aug. 11, 2017). The Court issued a preliminary injunction prohibiting the sale, use movement,
3 concealment, transfer of disposal of MOVA Assets by SHST or Virtual Global Holdings Limited
4 (“*VGH*”) – a subsidiary of Digital Domain Holdings Limited. *See Virtue Glob. Holdings Ltd. v.*
5 *Rearden LLC*, No. 15-cv-00797-JST, 2016 WL 9045855, at *2, *10 (N.D. Cal. June 17, 2016).

6 After a bench trial, the Court dissolved the injunction and held that “Rearden, not . . . DD3,
7 owns and at all relevant times has owned the MOVA Assets.” *SHST*, 2017 WL 3446585, at *9.
8 The Court further ordered the return of those assets to Rearden, which included “MOVA Software,
9 Source code, and Output files.” Order Regarding the Return of MOVA Assets 1, *SHST*, No. 15-
10 cv-00797-JST (N.D. Cal. Oct. 2, 2017), ECF No. 449. The Court further “retain[ed] jurisdiction
11 to enforce its Orders regarding the return of MOVA Assets to Rearden.” Judgment 2, *SHST*, No.
12 15-cv-00797-JST (N.D. Cal. Aug. 28, 2018), ECF No. 493. Additionally, the Court appointed a
13 special master to “adjudicate all post-trial disputes related to the enforcement of the Court’s
14 judgment and orders regarding the return of MOVA Assets to Rearden, . . . including the
15 identification, preservation, and return to Rearden of any and all MOVA Assets.” Order
16 Appointing Hon. Edward A. Infante (Ret.) as Special Master Pursuant to Federal Rule of Civil
17 Procedure 53, at 1, *SHST*, No. 15-cv-00797-JST (N.D. Cal. June 17, 2019), ECF No. 529.

18 Contemporaneously, Rearden filed a series of additional lawsuits, bringing copyright and
19 infringement claims against several movie studios – including The Walt Disney Company – that
20 allegedly contracted with DD3 for DD3 to provide services and content made using MOVA. *See*
21 *Rearden LLC v. Walt Disney Company*, 293 F. Supp. 3d. 963, 967-68 (N.D. Cal. 2018).
22 Proceedings in those cases are ongoing. *See* Case Nos. 15-cv-04006-JST, 17-cv-04187-JST, 17-
23 cv-04191-JST, 17-cv-04192-JST.

24 Plaintiffs Rearden LLC and Rearden Mova LLC (collectively, “Rearden”) now bring suit
25 against Defendants TWDC Enterprises 18 Corp. f/k/a The Walt Disney Company and several of
26 its subsidiaries, including Disney Content Services Co., Inc. d/b/a Disney Pictures Productions,
27 LLC; Walt Disney Pictures; Marvel Studios, LLC; MVL Film Finance LLC; Lucasfilm Ltd. LLC;
28 and Disney Studio Production Services Co., LLC (collectively, “Disney”). Rearden alleges that,

1 following this Court’s issuance of the preliminary injunction in the Ownership Litigation, DD3
2 used MOVA to create the character Thanos in the films *Avengers: Infinity War* and *Avengers:*
3 *Endgame*. SAC ¶¶ 37-55. Rearden brings claims for copyright infringement and patent
4 infringement against Disney on the basis of DD3’s alleged conduct. SAC ¶¶ 60-142.

5 **II. JURISDICTION**

6 The Court has jurisdiction under 28 U.S.C. §§ 1331 and 1338.

7 **III. LEGAL STANDARD**

8 To survive a motion to dismiss under Federal Rule of Civil Procedure 12(b)(6), a
9 complaint must contain “a short and plain statement of the claim showing that the pleader is
10 entitled to relief.” Fed. R. Civ. P. 8(a)(2). Dismissal “is appropriate only where the complaint
11 lacks a cognizable legal theory or sufficient facts to support a cognizable legal theory.”
12 *Mendiondo v. Centinela Hosp. Med. Ctr.*, 521 F.3d 1097, 1104 (9th Cir. 2008). “[A] complaint
13 must contain sufficient factual matter, accepted as true, to ‘state a claim to relief that is plausible
14 on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*,
15 550 U.S. 544, 570 (2007)). Factual allegations need not be detailed, but facts they must be
16 “enough to raise a right to relief above the speculative level.” *Twombly*, 550 U.S. at 555.

17 “A claim has facial plausibility when the plaintiff pleads factual content that allows the
18 court to draw the reasonable inference that the defendant is liable for the misconduct
19 alleged.” *Ashcroft*, 556 U.S. at 678. While this standard is not “akin to a ‘probability
20 requirement’ . . . it asks for more than a sheer possibility that a defendant has acted unlawfully.”
21 *Id.* (quoting *Twombly*, 550 U.S. at 556). “Where a complaint pleads facts that are ‘merely
22 consistent with’ a defendant’s liability, it ‘stops short of the line between possibility and
23 plausibility of entitlement to relief.’” *Id.* (quoting *Twombly*, 550 U.S. at 557). In determining
24 whether a plaintiff has met the plausibility requirement, a court must “accept all factual allegations
25 in the complaint as true and construe the pleadings in the light most favorable” to the
26 plaintiff. *Knieval v. ESPN*, 393 F.3d 1068, 1072 (9th Cir. 2005). A plaintiff may “plead[] facts
27 alleged upon information and belief where the facts are peculiarly within the possession and
28 control of the defendant or where the belief is based on factual information that makes the

1 inference of culpability plausible.” *Soo Park v. Thompson*, 851 F.3d 910, 928 (9th Cir. 2017)
2 (quoting *Arista Records, LLC v. Doe 3*, 603 F.3d 110, 120 (2d Cir. 2010)).

3 **IV. DISCUSSION**

4 Disney argues that Rearden’s complaint fails to plead sufficient facts to state a claim for
5 copyright infringement, that the claims of the patents at issue are ineligible for patent protection
6 under *Alice Corp. Pty. Ltd. v. CLS Bank International* (“*Alice*”), 573 U.S. 208 (2014), and that the
7 complaint otherwise fails to state a claim for patent infringement. ECF No. 42 at 27-32. Rearden
8 argues that the complaint sufficiently alleges direct copyright infringement for which Disney is
9 secondarily liable, that the inventions claimed in the patents are patent-eligible, and that the
10 complaint states a claim for indirect patent infringement. ECF No. 47 at 9-30. The Court
11 addresses each set of claims in turn.

12 **A. Copyright Infringement**

13 To state a claim for secondary copyright infringement against Disney, Rearden must first
14 sufficiently allege direct infringement of its copyright by DD3. *See MDY Indus., LLC v. Blizzard*
15 *Ent., Inc.*, 629 F.3d 928, 937 (9th Cir. 2010) (“To establish secondary infringement, Blizzard must
16 first demonstrate direct infringement.”). To allege direct infringement, Rearden must allege
17 “‘ownership of the allegedly infringed material’ and that [DD3] ‘violate[d] at least one exclusive
18 right granted to’ [Rearden] under 17 U.S.C. § 106.” *VHT, Inc. v. Zillow Grp., Inc.*, 918 F.3d 723,
19 731 (9th Cir. 2019) (quoting *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1013 (9th Cir.
20 2001)). Such rights encompass “protectable expression,” which includes a computer program’s
21 output provided that “the program ‘does the lion’s share of the work’ in creating the output and the
22 user’s role is so ‘marginal’ that the output reflects the program’s contents.” *Design Data Corp. v.*
23 *Unigate Enter., Inc.*, 847 F.3d 1169, 1173 (9th Cir. 2017) (quoting *Torah Soft Ltd. v. Drosnin*, 136
24 F. Supp. 2d 276, 283 (S.D.N.Y. 2001)).

25 Rearden’s allegations of direct infringement are twofold. First, Rearden alleges that DD3
26 used MOVA output files to animate Thanos. SAC ¶¶ 37-50. In support of these allegations,
27 Rearden relies on spreadsheets created by DD3 and returned to Rearden under the supervision of
28 the special master in the Ownership Litigation. *Id.* ¶¶ 37-50. The spreadsheet “lists files, the last

1 modify date of the files, and the file’s filepaths in the directory hierarchy.” *Id.* ¶ 43. The
2 spreadsheet entries include the terms “Mova” and “mova,” the term “thanos_head,” modification
3 dates coinciding with the production dates for the *Avengers: Infinity War* and *Avengers: Endgame*
4 projects, information indicating that the listed files were used in those projects, and information
5 allegedly identifying DD3 employees that worked on the projects. ¶ 37-49. Rearden also relies on
6 spreadsheet entries that detail internal messages among film production staff that mention
7 “thanos_head” and “mova.” *Id.* ¶ 50. Second, Rearden alleges that “[e]ach time that DD3
8 operated the [MOVA] system, whether to capture performances or to process the captured
9 performances into 3D output works, the computers made a copy of the [MOVA] program in their
10 CPU’s RAM without authorization from Rearden.” *Id.* ¶ 55.

11 Disney’s primary contention is that Rearden’s complaint fails plausibly to allege that DD3
12 did, in fact, operate the MOVA system. ECF No. 42 at 17-19. Rearden responds that the SAC
13 plausibly alleges that “DD3 must have created these [output] files using the MOVA Contour
14 software (SAC at ¶ 46), and that each time DD3 operated the Contour system, it made a RAM
15 copy of the program, without authorization (SAC at ¶ 55).” ECF No. 47 at 10. That, in Rearden’s
16 view, adequately supports its copyright infringement claim.

17 With respect to the output files, this Court previously found it implausible “that the MOVA
18 Contour output is created by the program without any substantial contribution from the actors or
19 directors.” *Rearden LLC*, 293 F. Supp. 3d at 970. The Court concluded that “Rearden must allege
20 that the MOVA program has done the ‘lion’s share of the work,’ and in particular ‘the lion’s share
21 of the creativity’ in creating the outputs.” *Id.* at 971 (quoting *Torah Soft*, 136 F. Supp. 2d at 283).
22 Here, Rearden alleges the opposite. To substantiate its theory of vicarious infringement, the
23 complaint relies on Disney’s “conten[tion] in other litigation that the *directors’ contribution* ‘is
24 substantial and performs the lion’s share of the creativity in the facial motion capture,’ and that
25 consequently the *directors are the authors of the results* of the facial motion capture.” SAC ¶ 69
26 (emphases added). For this reason, the Court holds that the complaint fails to allege that the
27 output files amount to protectable expression.

28 More fundamentally, the Court finds that Rearden does not plausibly allege that DD3 used

1 the MOVA software to create output files. In fact, Rearden does not identify any such files;
 2 instead, it relies on spreadsheets produced by DD3 in collateral litigation. In its opposition to the
 3 motion, Rearden describes its allegations about these spreadsheets as follows:

4 The SAC specifically alleges that a spreadsheet returned by DD3 in
 5 connection with the Ownership Litigation lists files showing the use
 6 of Contour to create MOVA data files that were used to create
 7 Thanos. SAC at ¶¶ 43-50. The file paths in the spreadsheet contain
 8 folder names showing: (1) the movie the files were used for; (2) the
 9 character that the files represent; and (3) a bottom level pair of
 folders, “mova/data,” indicating that they are MOVA data files.
 SAC at ¶ 43. The filenames and paths are not difficult to
 understand.

10 ECF No. 47 at 9. The spreadsheets do contain a limited number of folder and file-path names and
 11 internal messages that contain the word “MOVA.” But Rearden does not attach the spreadsheets
 12 to the SAC or include basic information like spreadsheet titles or data fields, or allege any facts
 13 about the underlying files. Rearden also does not allege that the returned files actually contain
 14 copies, or reflect the copying, of MOVA software. At best, the SAC alleges on information and
 15 belief that the file *paths* depicted in the spreadsheets, not the files themselves, “show that DD3
 16 operated MOVA.”¹ While the facts concerning the spreadsheets are well-pleaded and thus entitled
 17 to a presumption of truth, those facts are insufficient to support a reasonable inference that MOVA
 18 was operated “for facial captures or for processing captures into output works.” SAC ¶ 64.
 19 Without such information, Rearden’s “[f]actual allegations [are not] enough to raise a right to
 20 relief above the speculative level.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (citation
 21 omitted).

22 Rearden asks the Court to additionally infer that “DD3 must have created these files using
 23 the MOVA Contour software” because of “Rearden’s own knowledge of how the MOVA software
 24 works.” ECF No. 47 at 10. But unless Rearden shares that knowledge with the Court in its

25 ¹ The sentence in the complaint is not entirely clear. See SAC ¶ 46 (“On information and belief,
 26 based on at least the multiple spreadsheet entries for ‘thanos_head’ for the project “MARY”
 27 containing the file path portion “mova/data” with dates occurring after the Preliminary Injunction
 28 Order and during the filming of *Avengers: Infinity War* and *Avengers: Endgame* show that DD3
 operated MOVA to perform facial capture for use in *Avengers: Infinity War* and *Avengers:
 Endgame*.”).

1 complaint, the Court is left to guess as to how modification of an existing output file indicates that
2 the file was created by the operation of MOVA system during facial capture shoots for a specific
3 project. Therefore, the facts on which Rearden basis its belief do not “make[] the inference of
4 culpability plausible.” *Soo Park*, 851 F.3d at 928 (quoting *Arista Records*, 603 F.3d at 12)).
5 Stripped of its conclusory allegations, the complaint fails to allege that DD3 performed facial
6 capture shoots using the MOVA system. The complaint thus fails to plead direct infringement
7 and, by extension, secondary infringement. For this reason, the Court need not address the parties’
8 arguments with respect to contributory and vicarious infringement.

9 **B. Patent Infringement**

10 Patent eligibility under 35 U.S.C. § 101 “is a question of law” that “may be, and frequently
11 has been, resolved on a Rule 12(b)(6) motion . . . where the undisputed facts, considered under the
12 standards required by that Rule, require a holding of ineligibility under the substantive standards
13 of law.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (collecting
14 cases). But if there are claim construction disputes at the Rule 12(b)(6) stage, the Court must
15 either adopt the non-moving party’s constructions or resolve the disputes to whatever extent is
16 needed to determine eligibility. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d
17 1121, 1125 (Fed. Cir. 2018) (citing *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*,
18 827 F.3d 1341, 1352 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo*
19 *Bank, Nat. Ass’n*, 776 F.3d 1343, 1349 (Fed. Cir. 2014); *Genetic Techs. Ltd. v. Merial L.L.C.*, 818
20 F.3d 1369, 1373 (Fed. Cir. 2016)). In this case, neither party raises claim construction disputes
21 that prevent the Court from determining eligibility at this juncture.

22 “Section 101 . . . defines the subject matter eligible for patent protection” as “any new and
23 useful process, machine, manufacture, or composition of matter, or any new and useful
24 improvement thereof.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting
25 35 U.S.C. § 101). The Supreme Court has “long held that this provision contains an important
26 implicit exception: . . . abstract ideas are not patentable.” *Alice*, 573 U.S. at 216 (quoting *Ass’n*
27 *for Molecular Pathology v. Myriad Genetics*, 569 U.S. 576, 589 (2013)). But “an invention is not
28 rendered ineligible for patent simply because it involves an abstract concept.” *Id.* at 217. Courts

1 must distinguish between patents that claim abstract ideas, on the one hand, and patents “that
2 claim patent-eligible *applications* of those concepts,” on the other. *Id.* (emphasis added).

3 To determine whether a patent claims an abstract concept, courts engage in a two-step
4 inquiry. First, courts determine whether the claims at issue are “directed to” an abstract idea. *Id.*
5 “[S]tep one presents a legal question” only, which “does not require an evaluation of the prior art
6 or facts outside of the intrinsic record.” *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1372,
7 1374 (Fed. Cir. 2020). This analysis often begins “with an examination of eligible and ineligible
8 claims of a similar nature from past cases.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d
9 1288, 1295 (Fed. Cir. 2016). “Under this inquiry, [courts] evaluate the focus of the claimed
10 advance over the prior art to determine if the character of the claim as a whole, considered in light
11 of the specification, is directed to excluded subject matter.” *Trading Techs. Int’l, Inc. v. IBG LLC*,
12 921 F.3d 1378, 1384 (Fed. Cir. 2019) (internal quotation marks and citation omitted). When a
13 claim recites “a desired function or outcome, without providing any limiting detail that confines
14 the claim to a particular solution to an identified problem,” the “functional nature of the claim
15 confirms that it is directed to an abstract idea.” *Affinity Labs of Tex., LLC v. Amazon.com Inc.*,
16 838 F.3d 1266, 1269 (Fed. Cir. 2016). The “essentially result-focused, functional character of
17 claim language has been a frequent feature of claims held ineligible under § 101, especially in the
18 area of using generic computer and network technology.” *Elec. Power Grp., LLC v. Alstom S.A.*,
19 830 F.3d 1350, 1356 (Fed. Cir. 2016). Finally, there is no need to analyze every claim where “all
20 the claims are ‘substantially similar and linked to the same abstract idea.’” *Content Extraction &*
21 *Transmission LLC*, 776 F.3d at 1348.

22 If the claims are directed to an abstract idea, the inquiry proceeds to step two. At step two,
23 courts “consider the elements of each claim both individually and as an ordered combination” to
24 determine “whether [the claim] contains an ‘inventive concept’ sufficient to ‘transform’ the
25 claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 217, 221 (quoting
26 *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 73, 79 (2012)). “Stating an
27 abstract idea ‘while adding the words *apply it*’ is not enough for patent eligibility. Nor is limiting
28 the use of an abstract idea ‘to a particular technological environment.’” *Id.* at 223 (emphasis

1 added) (first quoting *Mayo*, 566 U.S. at 72; and then quoting *Bilski v. Kappos*, 561 U.S. 593, 610
2 (2010)). Rather, this test “is satisfied when the claim limitations ‘involve more than performance
3 of well-understood, routine, [and] conventional activities previously known to the industry.’”
4 *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (alteration in original) (quoting
5 *Content Extraction*, 776 F.3d at 1347-48). Both parts of the inquiry are informed by “the claims
6 in light of the written description.” *Amdocs (Isr.) Ltd.*, 841 F.3d at 1299.

7 The complaint alleges that Disney has infringed and continues to infringe on four patents
8 of which Rearden is the assignee: U.S. Patent Nos. 10,825,226 (“’226 patent”), 11,004,248 (“’248
9 patent”), 11,024,074 (“’072 patent”), and 11,030,790 (“’790 patent”). SAC ¶ 11; ECF No. 38-1;
10 ECF No. 38-2 at 2; ECF No. 38-3; ECF No. 38-4. The patents were filed between February 14,
11 2020 and January 4, 2021 but claim priority to U.S. Provisional Patent Application 60/724,565,
12 which was filed on October 7, 2005. SAC ¶ 30. The complaint mentions and the parties present
13 argument only with respect to claim 1 of the ’226 patent, claim 1 of the ’248 patent, claim 9 of the
14 ’072 patent, and claim 9 of the ’790 patent. ECF No. 42 at 24-31; ECF No. 47 at 18-27.

15 Accordingly, the Court treats each claim as representative of the eligibility of its corresponding
16 patent. *See Berkheimer*, 881 F.3d at 1365 (“Courts may treat a claim as representative . . . if the
17 patentee does not present any meaningful argument for the distinctive significance of any claim
18 limitations not found in the representative claim.”).

19 The patents share a common specification, which explains that the “invention[s] relate
20 generally to the field of motion capture.” *E.g.*, ’226 patent at 1:32-33. The shared specification
21 explains that “[i]n a typical motion capture session, the motion of a ‘performer is captured and
22 translated to a computer-generated character.” *E.g.*, *id.* at 1:43-45. The specification then
23 describes problems with existing systems and methods of marker-based motion capture, projected-
24 pattern motion capture, and cloth animation. *E.g.*, *id.* at 2:28-3:56. Through a detailed series of
25 embodiments, the specification further describes “an improved apparatus and method for
26 performing motion capture using a random pattern of paint applied to portions of a performer’s
27 face and/or body.” *E.g.*, *id.* at 5:35-37. At the end of those embodiments, the specification
28 explains that “numerous specific details were set forth in order to provide a thorough

1 understanding of the present system and method. It will be apparent, however, to one skilled in
2 the art that the system and method may be practiced without some of these specific
3 details. Accordingly, the scope and spirit of the present invention should be judged in terms of the
4 claims which follow.” *E.g., id.* at 26:63-27:2.

5 Claim 1 of the ’226 patent recites:

6 A method, comprising:

7 communicating a digital video stream with at least part of a
8 3D rendered animated face which includes 3D facial shapes
9 that:

10 are correlated to a plurality of high resolution 3D facial
11 capture shapes that track the high resolution 3D motion of a
12 performer’s face from a first facial performance; and that

13 correspond to similar facial expression of a performer’s face
14 from a second facial performance.

15 ’226 patent at 27:4-13. Claim 1 of the ’248 patent recites:

16 A system, comprising:

17 a plurality of cameras, each capturing a plurality of two-
18 dimensional (2D) frames of some or all of a surface of a
19 performer’s face as the performer’s face changes in some or
20 all of the plurality of time intervals;

21 a processor that correlates the plurality of 2D frames from the
22 plurality of cameras at the plurality of time intervals to create
23 a high-resolution three-dimensional (3D) mesh corresponding
24 to a 3D shape of some or all of the surface of the performer’s
25 face at some or all of the time intervals;

26 wherein a first plurality of 3D points in the high-resolution 3D
27 mesh automatically track a second plurality of 3D points on
28 the surface of the performer’s face;

wherein the second plurality of 3D points on the surface of the
performer’s face are not identified by markers applied to the
performer’s face.

’248 patent at 27:5-15. Claim 9 of the ’072 patent recites:

A method, comprising:

communicating data representing a rendered animated three-
dimensional (3D) face;

1 the data including a rendering of a first plurality of 3D points
2 on at least part of the rendered animated 3D face at a first
3 plurality of time intervals correlated to a high resolution
4 second plurality of 3D points on at least part of a surface of a
5 performer's face at a second plurality of time intervals;

6 wherein the second plurality of 3D points on the surface of the
7 performer's face were not identified by markers applied to the
8 performer's face;

9 and wherein a processor automatically tracked the second
10 plurality of 3D points.

11 '072 patent, 27:38-51. Finally, Claim 9 of the '790 patent recites:

12 A method, comprising:

13 communicating a movie or video that includes a rendered
14 animated three-dimensional (3D) face;

15 at least part of the movie or video including a rendering of a
16 first plurality of 3D points on at least part of the rendered
17 animated 3D face at a first plurality of time intervals
18 correlated to a high resolution second plurality of 3D points
19 on at least part of a surface of a performer's face at a second
20 plurality of time intervals;

21 wherein the second plurality of 3D points on the surface of the
22 performer's face were not identified by markers applied to the
23 performer's face;

24 and wherein a processor automatically tracked the second
25 plurality of 3D points.

26 '790 patent, 27:38-51.

27 **1. Alice Step One**

28 Disney argues that the representative claims are directed towards the abstract idea of facial motion capture but fail to describe how to perform it and, as a consequence, preempts facial motion capture generally. ECF No. 42 at 26. Rearden argues that the representative claims are limited to specific methods of facial capture animation that do not preempt the general field of facial capture animation. ECF No. 47 at 21-22.

In support of their arguments, the parties set forth competing interpretations of the Federal Circuit's decision in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). In that case, the patents related to "automating part of a preexisting 3-D animation method" for creating the lip synchronization and facial expressions of three-dimensional

1 characters. *Id.* at 1303. The method at issue “morph[ed] the character’s expression between”
 2 “multiple 3-D models of a character’s face” in order “[t]o animate the character as it speaks.” *Id.*
 3 A neutral facial expression would be morphed into “other models of the character’s face,” called
 4 “morph targets.” The morph targets each “represent that face as it pronounces a phoneme, i.e.,
 5 makes a certain sound.” *Id.* The “differences in location . . . between the neutral model and the
 6 morph target form a ‘delta set’ of vectors representing the change in location . . . between the two
 7 models.” *Id.* That delta set is assigned a value called the “morph weight.” *Id.* at 1304 (quoting
 8 U.S. Patent No. 6,307,576, 7:65). The representative and dispositive claim of the patent recited:

9 A method for automatically animating lip synchronization and facial
 10 expression of three-dimensional characters comprising:

11 obtaining a first set of rules that define output morph weight
 12 set stream as a function of phoneme sequence and time of said
 13 phoneme sequence;

14 obtaining a timed data file of phonemes having a plurality of
 15 sub-sequences;

16 generating an intermediate stream of output morph weight sets
 17 and a plurality of transition parameters between two adjacent
 18 morph weight sets by evaluating said plurality of sub-
 19 sequences against said first set of rules;

20 generating a final stream of output morph weight sets at a
 21 desired frame rate from said intermediate stream of output
 22 morph weight sets and said plurality of transition parameters;
 23 and

24 applying said final stream of output morph weight sets to a
 25 sequence of animated characters to produce lip
 26 synchronization and facial expression control of said animated
 27 characters.

28 *Id.* at 1307 (quoting U.S. Patent No. 6,307,576, 11:27-47).

 The *McRO* defendants argued, *inter alia*, that the representative claim of the patents
 “merely purport[ed] to take a preexisting process and make it faster.” *Id.* at 1310. The Federal
 Circuit framed the issue as “whether the claims in the patents focus on a specific means or method
 that improves the relevant technology or are instead directed to a result or effect that itself is the
 abstract idea and merely invoke generic processes and machinery.” *Id.* at 1314. The Federal
 Circuit held that “[b]y incorporating the specific features of the rules as claim limitations,” the

1 representative claim was “limited to a specific process for automatically animating characters
2 using particular information and techniques and does not preempt approaches that use rules of a
3 different structure or different techniques.” *Id.* at 1316. Because “[t]he claim use[d] the limited
4 rules in a process specifically designed to achieve an improved technological result in
5 conventional industry practice,” the claim was “not directed to an abstract idea.” *Id.* at 1316.

6 In contrast with the rules of the representative claim at issue in *McRO*, the steps of the
7 representative claims of the patents at hand lack any limitations that incorporate particular
8 information or feature specific techniques. Claim 1 of the ‘226 patent, for example, recites a
9 method comprising “communicating a digital video stream,” but provides no information as to the
10 manner by which the video stream is to be communicated, the manner in which the 3D facial
11 shapes communicated in that stream “are correlated to a plurality of high resolution 3D facial
12 surfaces,” the process by which those surfaces “track the high resolution 3D motion of a
13 performer’s face from a first facial performance,” or the manner in which the 3D facial shapes
14 “correspond to similar expressions of a performer’s face from a second facial performance.” ’226
15 patent at 27:4-13. Similarly, claim 1 of the ’248 patent recites no specific process for “capturing a
16 plurality of two dimensional (2D) frames,” “correlate[ing] the plurality of 2D frames from the
17 plurality of cameras at the plurality of time intervals,” or “creat[ing] a high-resolution three-
18 dimensional (3D) mesh,” nor does it describe the manner by which a “first plurality of 3D points
19 in the high-resolution 3D mesh automatically track a second plurality of 3D points.” Claim 9 of
20 the ’072 patent and claim 9 of the ’790 patent suffer from the same deficiencies. And although the
21 claims do require that the plurality of points *not* be identified by markers, the claims fail to specify
22 the manner in which the points *are* to be identified.

23 Rearden maintains that the representative claims “require a specific combination of
24 components” and “require specific types of markerless facial capture.” ECF No. 47 at 20-21. But
25 the claims contain no language that either limits or otherwise specifies the process by which the
26 generic processes that the claims invoke are to be carried out. Where the claim at issue in *McRO*
27 “require[d] that the rules be rendered in a specific way: as a relationship between subsequences of
28 phenomes, timing, and the weight on which each phenome is expressed visually (as represented by

1 the morph weight set),” 837 F.3d at 1315, the steps in the claims of the patents at hand contain no
 2 analogous requirements. Rather, they “merely invoke generic processes,” such as communicating,
 3 correlating, tracking, and creating. *McRO*, 837 F.3d at 1314.

4 Because the claims fail to recite specific means of implementing the abstract concept of
 5 markerless facial motion capture, the Court holds that the patents are directed to abstract ideas.
 6 *See Content Extraction*, 776 F.3d at 1347 (holding claims were abstract because they were
 7 directed to “the basic concept of data recognition and storage”); *In re TLI Commc ’ns LLC Patent*
 8 *Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (holding claims were abstract because they were
 9 “directed to the abstract idea of classifying and storing digital images in an organized manner”);
 10 *c.f. Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1150 (Fed. Cir. 2019) (holding
 11 claims were not abstract because they “recit[ed] a specific implementation of the varying way that
 12 check data is generated that improves the ability of prior art error detection systems to detect
 13 systematic errors”); *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1348 (Fed. Cir. 2018)
 14 (holding claim was not abstract because it “specifically identifie[d] how [a] functionality
 15 improvement is effectuated”); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed.
 16 Cir. 2018) (holding claims were not abstract because they recited a “specific structure . . . that
 17 performs a specific function”).

18 **2. Alice Step Two**

19 Disney argues that the representative claims fail to supply an inventive concept. ECF No.
 20 42 at 27-31. Rearden argues that the inventive concept is demonstrated by “the specific
 21 requirements of how the animated face is created, how the performer’s face is captured and
 22 translated into a computer representation . . . , and how the computer representations are related to
 23 each other.” ECF No. 47 at 25-26.

24 At bottom, the representative claims “simply instruct the practitioner to implement the
 25 abstract idea.” *Alice*, 573 U.S. at 225. Although the claims require that their respective steps be
 26 performed in a particular order, the steps within that order lack specificity. Instead, they contain
 27 “generic functional language” that describes the creation of a 3D mesh through the correlation of
 28 2D frames containing high resolution sets of facial shapes that are obtained by tracking areas on a

1 performer’s face. *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1339.
 2 (Fed. Cir. 2017). As discussed above, the claims lack any “requirements for *how* the desired result
 3 is to be achieved,” *id.* (quoting *Elec. Power Grp.*, 830 F.3d at 1355), and instead “simply recite[]
 4 that the abstract idea of [facial motion capture] will be implemented using conventional
 5 components and functions generic to [facial motion capture technology],” *Affinity Labs*, 838 F.3d
 6 at 1263.² Because each claim “contains no restriction on how the result is accomplished ... [and]
 7 [t]he mechanism ... is not described, although this is stated to be the essential innovation[,]” the
 8 claims fail to recite an inventive concept and are not patent-eligible. *Intell. Ventures I LLC v.*
 9 *Symantec Corp.*, 838 F.3d 1307, 1316 (Fed. Cir. 2016) (alterations in original) (quoting *Internet*
 10 *Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015)).

11 Rearden contends that the shared specification contains additional details of the inventions
 12 and therefore demonstrates that the claims supply an inventive concept. ECF No. 47 at 26-
 13 27. But “[t]o save a patent at step two, an inventive concept must be evident in the claims”
 14 themselves. *Two-Way Media Ltd.*, 874 F.3d at 1338. And although the specification describes a
 15 series of detailed embodiments containing components techniques that purport to improve on
 16 preexisting markerless facial motion capture technology, the specification explicitly rejects the
 17 notion that those components and techniques are essential to the claimed inventions. *See* ’226
 18 patent at 26:63-27:2 (“[N]umerous specific details were set forth in order to provide a thorough
 19 understanding of the present system and method. It will be apparent, however, to one skilled in
 20 the art that the system and method may be practiced without some of these specific
 21 details. Accordingly, the scope and spirit of the present invention should be judged in terms of the
 22 claims which follow.”). Regardless, “the level of detail in the specification does not transform a
 23 claim reciting only an abstract concept into a patent-eligible system or method,” and Rearden’s
 24

25 ² In the same vein, the “ordered combination of these” generic functions does not constitute a non-
 26 generic arrangement sufficient to supply an inventive concept. *Two-Way Media*, 874 F.3d at
 27 1339. The steps require cameras to track a performers face, relate captured frames of the face to
 28 one another, and create a 3D representation of the performer’s face at various time intervals.
 According to the shared specification, that ordering is characteristic of facial motion capture. *See*,
 e.g., ’226 patent at 1:43-45 (“In a typical motion capture session, the motion of a ‘performer is
 captured and translated to a computer-generated character.”).

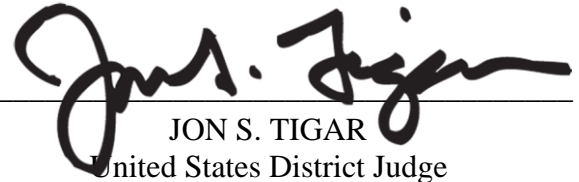
1 argument is thus without merit. *Accenture Global Servs., GmbH v. Guideware Software, Inc.*, 728
2 F.3d 1336, 1345 (Fed. Cir. 2013); *see Symantec Corp.*, 838 F.3d at 1322.

3 **CONCLUSION**

4 For the foregoing reasons, Disney's motion is granted. Rearden's complaint is dismissed
5 without prejudice. Although Rearden has twice amended its complaint, this order represents the
6 first time these issues have come before the Court, and Disney has not otherwise shown that
7 amendment would prejudice Disney, is sought in bad faith, would produce an undue delay, or
8 would be futile. *See AmerisourceBergen Corp v. Dialyst West, Inc.*, 465 F.3d 946, 951 (9th Cir.
9 2006). Rearden may file an amended complaint within twenty-one days of this order solely to
10 cure the deficiencies identified by this order. Failure to file a timely amended complaint will
11 result in dismissal with prejudice.

12 **IT IS SO ORDERED.**

13 Dated: February 21, 2023

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15 _____
16 JON S. TIGAR
17 United States District Judge

United States District Court
Northern District of California

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