

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

_____)	
WORLDS, INC.,)	
)	
Plaintiff)	
)	
v.)	
)	Civil Action No. 12-10576-DJC
ACTIVISION BLIZZARD, INC.,)	
BLIZZARD ENTERTAINMENT, INC. and)	
ACTIVISION PUBLISHING, INC.,)	
)	
Defendants.)	
_____)	

MEMORANDUM AND ORDER

CASPER, J.

April 30, 2021

I. Introduction

Plaintiff Worlds, Inc., (“Worlds”) alleges that Defendants Activision Blizzard, Inc., Blizzard Entertainment, Inc. and Activision Publishing, Inc. (collectively, “Activision”) infringe United States Patents Nos. 7,181,690 (“690”), 7,493,558 (“558”), 7,945,856 (“856”), 8,082,501 (“501”) and 8,145,998 (“998”) (collectively, the “Patents-In-Suit”). Activision has moved for summary judgment seeking a ruling that the remaining claims of the Patents-In-Suit at issue are invalid as a matter of law. D. 272. For the following reasons, the Court **ALLOWS** Activision’s motion.

II. Factual Background

The following material facts are based upon Activision’s Statement of Material Facts, D. 177, Worlds’ Statement of Material Facts, D. 185, and/or the documents referenced in same and are undisputed.

A. Patents-In-Suit

At this juncture, Worlds presses that Activision infringes the following twenty-one claims of the Patents-In-Suit: ‘690 claims 4, 8, 13 and 16; ‘558 claims 5 and 7; ‘856 claim 1; ‘501 claims 1-8, 10, 12 and 14-16; and ‘998 claim 18. D. 269 at 2; D. 283 at 10. As Worlds has explained, the Patents-In-Suit resolve bandwidth issues with multiplayer games through “multi-criteria filtering of avatar position and state information, but at the client side and the server side,” i.e., “crowd control.” D. 183 at 5. The remaining claims at issue achieve crowd control by some form of filtering of information, D. 183 at 8, but in slightly different ways: i.e., by “fewer than all” in the ‘856 patent; a “maximum number” in the ‘690 patent and ‘558 patent; and by “condition” in the ‘501 patent and the ‘998 patent. D. 273 at 6.

U.S. Patent No. 7,181,690 (“the ‘690 patent”)

The ‘690 patent, “a system and method for enabling users to interact in a virtual space,” was filed on August 3, 2000 and issued on February 20, 2007. D. 275 ¶ 1; D. 274-1 at 2. It provides a “highly scalable architecture for a three-dimensional, graphical, multi-user, interactive virtual world system.” *Id.* So that a user’s view “can be updated to reflect the motion of the remote user’s avatars, motion, information is transmitted to a central server process which provides positions updates to client processes for neighbors of the user at that client process.” *Id.* “The client process also uses an environment database to determine which background objects to render as well as to limit the movement of the user’s avatar.” *Id.*

Claims 4, 8, 13 and 16 of the ‘690 patent are currently at issue. Claim 4 (incorporating the method of claim 1 which is a “method for enabling a first user to interact with other users in a virtual space”) involves determining the maximum number of the other users’ avatars to be displayed by comparing the actual number to the maximum number of other users’ avatars to be

displayed. D. 274-01 at 13. Claim 8 (incorporating the method of claim 6 which is a “method for enabling a plurality of users to interact in a virtual space”) also involves a maximum number of avatars by comparing the actual number of avatars that are not associated with the client process based on the positions transmitted by the server process to the maximum number of avatars that can be displayed. D. 274-1 at 13. Claim 13 (incorporating the software program of claim 11) provides instructions for determining the other users’ avatars to be displayed by comparing the actual number of the other users’ avatars (from the received positions) to the maximum number of the other users’ avatars to be displayed. D. 274-1 at 14. Claim 16 (incorporating the software program of claim 15) provides instructions for determining which avatars to be displayed from comparing the determination of the actual number of avatars that are not associated with the client process based on the positions transmitted by the server process to the maximum number of avatars that can be displayed. D. 274-1 at 14.

U.S. Patent No. 7,493,558 (“the ‘558 patent”)

The ‘558 patent, a “system and method for enabling users to interact in a virtual space,” was filed on November 2, 2006 and issued on February 17, 2009. D. 275 ¶ 22; D. 274-2 at 1. Worlds continues to assert claims 5 and 7 of the ‘558 patent in this litigation. Similar to the claims in the ‘690 patent, these claims achieve crowd control by filtering through a maximum number. Claim 5 (incorporates the machine-readable medium of claim 40) provides that the avatars to be displayed is determined by comparing “an actual number of avatars in the set associated said each client process based on the positions transmitted by the server process” to “a maximum number of avatars that can be displayed to the user associated with said each client process.” D. 274-2 at 14. Claim 7 (incorporates the computer readable medium of claim 6) determines the avatars to be displayed by comparing “an actual number of avatars that are not associated with the client process

based on the positions transmitted by the server process” with “a maximum number of avatars that can be displayed.” D. 274-2 at 14.

U.S. Patent No. 7,945,856 (“the ‘856 patent”)

The ‘856 patent, a “system and method for enabling users to interact in a virtual space.” was filed on January 13, 2009 and issued on May 17, 2011. D. 275 ¶ 36; D. 274-3 at 1. This patent serves to achieve crowd control by filtering information by “fewer than all” methods. Worlds presses claim 1 of the ‘856 patent. Claim 1 is a “method for enabling a first user to interact with second users in a virtual space . . . , the method comprising: (a) receiving by the first client process from the server process received positions of selected second avatars; and (b) determining, from the received positions, a set of the second avatars that are to be displayed to the first user, wherein the first client process receives positions of fewer than all of the second avatars. D. 274-3 at 24.

U.S. Patent No. 8,082, 501 (“the ‘501 patent”)

The ‘501 patent, a “system and method for enabling users to interact in a virtual space,” was filed on March 19, 2009 and issued on December 20, 2011. D. 275 ¶ 52; D. 274-4 at 1. This patent also achieves crowd control through filtering information by a condition or conditions. Worlds asserts claims 1-8, 10, 12, and 14-16 of the ‘501 patent.

Claim 1-8 concern a “method for enabling a first user to interact with other users in a virtual space, . . . , the method comprising the steps” that vary with each claim. D. 274-4 at 23. In claim one, the steps involve customizing “an avatar in response to input by the first user,” receiving “position information associated with fewer than all of the other user avatars in an interaction room of the virtual space, from a server process, wherein the client device does not receive position information of at least some avatars that fail to satisfy a participant condition imposed on avatars

displayable on a client device display of the client device; determining, . . . a displayable set of the other user avatars associated with the client device displayed; and displaying, . . . the displayable set of the other user avatars associated with the client device display.” Id. Claims 2-8 and 10 add or alter the conditions of the method in Claim 1. Id.

Claim 12 is a “client device for enabling a first user to interact with other users in a virtual space” and is comprised of “a memory storing instructions” and “a processor programmed using the instructions” for various conditions for “determin[ing] a set of the other users’ avatars displayable on a screen associated with the client device.” Id. at 23. Claim 14 is an “article of manufacture comprising at least one memory storing computer code for enabling a first user to interact with other users in a virtual space, . . . the computer code comprising instructions for conditions for customizing, receiving, determining and then displaying the other user avatars.” Id. Claims 15 and 16 incorporate the article of manufacture in Claim 14 and add or alter the conditions for displaying the other user avatars. Id.

U.S. Patent No. 8,145,998 (“the ‘998 patent”)

The ‘998 patent, a “system and method for enabling users to interact in a virtual space, was filed on March 19, 2009 and issued on March 27, 2012. D. 275 ¶¶ 92; D. 274-5 at 1. Similar to claims in the ‘501 patent, the claims in this patent achieve crowd control through filtering information by conditions. Worlds asserts Claim 18 here. D. 283 at 10. Claim 18 is a “system for displaying interactions in a virtual world among a local user and a plurality of remote users, comprising a database . . . ; a memory storing instructions and a processor programmed using instructions to receive position information [based on certain conditions], receive orientation information [based on certain conditions], generate on a graphic display a rendering of a perspective view of the virtual world in three dimensions [based on certain conditions], and change

in three dimensions the perspective view of the rendering of the graphic display of the virtual world in response to user input.” D. 274-5 at 22-23.

B. Inter Partes Review before the PTAB

In May and June 2015, a third party, Bungie, Inc., filed a series of IPR petitions challenging the validity of the asserted claims of the Patents-In-Suit under 35 U.S.C. § 102 and 103. The Patent Trial and Appeal Board (“PTAB”) held six IPRs covering all forty claims asserted in this lawsuit before the stay, issuing final written decisions in all six proceedings. The PTAB determined that 34 of the claims were unpatentable: claim 1 of the ‘856 patent, claims 1-3, 5-7, 10-12, 14, 15, 17 and 19 of the ‘690 patent, claims 4, 6, 8 and 9 of the ‘558 patent, claims 1, 18 and 20 of the ‘998 patent, and claims 1-8, 10, 12, 14-16 of the ‘501 patent. D. 273 at 8-9.

The PTAB determined that the petitioner did not demonstrate by a preponderance of evidence that claims 4, 8, 13 and 16 of the ‘690 patent and claims 5 and 7 of the ‘558 patent were invalid based on the evidence and arguments presented in the proceedings. *Id.* at 9. Worlds appealed the PTAB’s decisions regarding the ‘856 patent (IPR2015-01264), the ‘501 patent (IPR2015-01319) and the ‘998 patent (IPR2015-01321). In Worlds Inc. v. Bungie, Inc., 903 F.3d 1237 (Fed. Cir. 2018), the Federal Circuit vacated and remanded these final written decisions on procedural grounds, and without addressing the PTAB’s substantive findings. *Id.* On September 7, 2018, the Federal Circuit vacated and remanded Final Written Decisions in IPR2015-01264 (related to ‘856 patent), IPR2015-01319 (related to ‘501 patent) and IPR2015-01321 (related to ‘998 patent) back to the PTAB. D. 283 at 15 (citing Worlds, 903 F.3d at 1237). On January 14, 2020, the PTAB issued a Termination Vacating Institutions and Dismissing Proceedings on Remand in IPR2015-01264 (related to ‘856 patent), IPT2015-01319 (related to ‘501 patent) and IPR2015-01321 (related to ‘998 patent). *Id.*

1. PTAB findings

The PTAB's IPR decision may be relied upon as persuasive authority before this Court. Ultratec, Inc. v. Sorenson Comms., Inc., No 14-cv-66-jdp, 2015 WL 5330284, at *14 (W.D. Wis. Sept. 11, 2015) (noting that the court was “not bound by the PTAB decision, but its reasoning is persuasive”); DSS Tech. Mgmt., Inc. v. Apple, Inc., No. 14-cv-05330-HSG, 2015 WL 1967878, at *4 (N.D. Cal. May 1, 2015) (observing that “PTAB's invalidity analyses ‘would likely prove helpful to this Court,’ whether or not the standard applied is identical to the one this Court must apply in the litigation.”) (quoting Black Hills Media, LLC v. Pioneer Electronics (USA) Inc., No. CV 14-00471 SJO (PJWx), 2014 WL 4638170, at *6 (C.D. Cal. May 8, 2014)); Black Hills, 2014 WL 4638170, at *6 (noting that the “Court may also derive benefit from the PTAB's claim construction for the patents under review” and that “[w]hile the PTAB interprets claim terms using the ‘broadest reasonable construction,’ 37 C.F.R. § 42.100(b), its analysis would likely prove helpful to this Court, no matter its final determination”); CANVS Corp. v. United States, 118 Fed. Cl. 587, 593 (2014) (observing that “even if [certain claims] were to survive PTAB review, the PTAB's final decision sustaining these claims would contain analysis that would be helpful to the court”). Accordingly, although not bound by its findings or rulings, this Court may consider the PTAB findings as persuasive authority in determining whether the Patents-In-Suit are patent eligible.

With nineteen of the forty original asserted claims having been fully adjudicated, Worlds is asserting the remaining twenty-one claims in this suit: claim 1 of the ‘856 patent, claims 4, 8, 13 and 16 of the ‘690 patent, claims 5 and 7 of the ‘558 patent, claims 1-8, 10, 12 and 14-16 of the ‘501 patent and claim 18 of the ‘998 patent. D. 269 at 2. Although now vacated, the substance of the PTAB's prior rulings serves to support the Court's analysis below that the client-side and

server-side filtering of position information is not inventive. D. 274-7 (PTAB's Final Written Decision on the '856 patent); D. 274-8 (PTAB's Final Written Decision on the '501 patent); D. 274-9 (PTAB's Final Written Decision on the '998 patent).

C. Relevant Procedural History

On March 30, 2012, Worlds initiated this action. D. 1. The Court allowed Defendants' motion for summary judgment as to invalidity, D. 83, concluding that the Patents-In-Suit were not entitled to claim priority on November 13, 1995, the filing date of Worlds' Provisional Application. D. 124. Worlds has pressed the remaining infringement claims as to infringement from the issuance of the certificates of correction by the PTO. D. 127 at 2. After a Markman hearing, the Court constructed disputed claim terms in an Order issued June 26, 2015. D. 153. The parties then exchanged updated infringement and invalidity contentions. D. 160, 164. The Court issued a Scheduling Order on September 16, 2015, adopting the pretrial schedule proposed by the parties. D. 181. On December 16, 2015, the parties jointly moved to stay this proceeding pending resolution of the IPR petitions before the PTAB. D. 198. The Court allowed that motion and issued a stay and ordered periodic status updates. D. 201. Over the course of the next few years, while the IPR proceedings were ongoing, the parties filed periodic status reports and requests to extend the stay, which the Court allowed. See D. 201 to 235. At the request of Worlds seeking a status conference, D. 239, and after briefing from the parties regarding the status of the matter, the Court held a status conference on April 16, 2020 and then set a further schedule for this case, including a deadline by which Activision could file the now pending motion. D. 262, 264. On May 19, 2020, Activision filed this motion for summary judgment that the remaining patent claims are invalid under 35 U.S.C § 101. D. 272. The Court heard arguments and took the matter under advisement. D. 286.

III. Standard of Review

A court will grant a moving party's motion for summary judgment when there is no genuine dispute of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a). A dispute is genuine if "the evidence about the fact is such that a reasonable jury could resolve the point in favor of the nonmoving party," Vélez-Rivera v. Agosto-Alicea, 437 F.3d 145, 150 (1st Cir. 2006) (quoting United States v. One Parcel of Real Prop., 960 F.2d 200, 204 (1st Cir. 1992)) (internal quotation marks omitted), and a fact is material if it is "one that might affect the outcome of the suit under the governing law." Id. (quoting Morris v. Gov't Dev. Bank of P.R., 27 F.3d 746, 748 (1st Cir. 1994)) (internal quotation marks omitted). In resolving a motion for summary judgment, the Court scrutinizes the record in the light most favorable to the summary judgment opponent and draws all reasonable inferences to that party's advantage. Alliance of Auto. Mfrs. v. Gwadosky, 430 F.3d 30, 34 (1st Cir. 2005).

An issued patent is presumed valid. 35 U.S.C. § 282. This "statutory presumption of validity" applies when a party challenges a patent under 35 U.S.C. § 101. CLS Bank Intern. V. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1284 (Fed. Cir. 2013). "[T]he burden is on the party challenging the validity of a patent to show that it is invalid by clear and convincing evidence." Minnesota Min. & Mfg. Co. v. Chemque, Inc., 303 F.3d 1294, 1301 (Fed. Cir. 2002); see Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1376 (Fed. Cir. 2001). Consequently, "a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of invalidity so that no reasonable jury could find otherwise." Eli Lilly Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). When facts associated with a patent invalidity are not in dispute, the court determines "whether summary judgment of invalidity is correct by applying the law to the undisputed facts." Myspace, Inc. v. GraphOn Corp., 672 F.3d 1250, 1257 (Fed. Cir.

2012) (citing Tokai Corp. v. Easton Enters., Inc., 632 F.3d 1358, 1366 (Fed. Cir. 2011)). For the reasons stated below, the Court concludes, on this undisputed record, that the remaining patent claims are invalid as a matter of law under §101.

IV. Discussion

A. Patent Eligibility Under 35 U.S.C. § 101

1. Legal Framework

Under the Patent Act, “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The claims asserted here as to the Patents-In-Suit describe a “process,” defined as a “process, art or method, and includ[ing] a new use of a known process, machine, manufacture, composition of matter, or material.” Id. § 100(b). Activision challenges that this process is patentable under § 101.

Under § 101, certain categories are not eligible for patent protection. Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980). “Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” Gottschalk v. Benson, 409 U.S. 63, 67 (1972). Although “too broad an interpretation of this exclusionary principle could eviscerate patent law,” since “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 71 (2012), “monopolization of those tools [of scientific and technological work] through the grant of a patent might tend to impede innovation more than it would tend to promote it.” Id.

Mayo is instructive in this regard. In that case, the Supreme Court addressed the patent eligibility of claims covering processes that help doctors determine the appropriate dosage of thiopurine drugs for patients with autoimmune diseases. Mayo, 566 U.S. at 74-75. The claims described the relationships between the quantity of certain thiopurine metabolites in the blood and the likelihood that a drug would be ineffective or produce unwanted side effects. Id. at 74. More specifically, the patent claimed a process of administering a drug containing a metabolite to a subject and determining the subject's level of that metabolite, where a certain reading of the metabolite would indicate the need to change the dose of the drug. Id. at 75.

The Supreme Court concluded that the patent was invalid under § 101 because the patent effectively claimed a law of nature, “namely, relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm.” Id. at 75. The Supreme Court reviewed each element in the patent beyond the recitation of this natural chemical relationship and then all the elements together to determine whether the claims added enough to qualify as a patent-eligible process “applying” a natural law. The “administering” step simply referred to a pre-existing audience of doctors treating patients with certain diseases. Id. at 77. The “wherein” clauses informed the doctor of the relevant natural laws: the relationships between the metabolite concentration in the blood and the necessary drug dosage adjustment. Id. The “determining” step instructed the doctor to measure the level of the relevant metabolite through any process of the doctor's choosing. Id. Finally, the steps together amounted to “nothing significantly more than an instruction to doctors to apply the applicable laws when treating their patients.” Id. at 78. Mayo ruled each of these elements insufficient to transform the underlying natural law into something patentable: “the claims inform a relevant audience about certain laws of nature; any additional steps consist of well-understood, routine, conventional

activity already engaged in by the scientific community; and those steps, when viewed as a whole, add nothing significant beyond the sum of their parts taken separately.” Id. at 80.

Even when a process involves a computer-generated process, it still may not be patent-eligible under § 101. In Alice Corp. v. CLS Bank Int'l, 573 U.S. 208 (2014), the Supreme Court ruled that a computerized scheme for mitigating settlement risk was not patent eligible under § 101. As Alice framed the analysis in Mayo, a patent that claims a law of nature, natural phenomenon or an abstract idea is not patent eligible unless it has an element or combination of elements that provide an “inventive concept” beyond that law, phenomenon or abstract idea. Id. at 216. If in the first step, the patent claims a law of nature, natural phenomenon or an abstract idea, in the second step, a court proceeds to the “search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.’” Id. at 217-18 (quoting Mayo, 566 U.S. at 74–77). In Alice, the Supreme Court applied this two-step analysis to a patent claiming a method of using a third party to mitigate settlement risk. Id. at 213–214. In doing so, the court concluded that the claims were directed to the abstract idea of intermediated settlement and proceeded to consider whether the elements of the claim, either individually or in combination, were sufficient to transform the claims into a patentable invention. Id. at 216–218. Ruling that the “claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer,” the Supreme Court held the patent invalid for want of an inventive concept. Id. at 225. Like Mayo, the claim elements were well-understood, routine and conventional activities known in the industry. Id. “[E]ach step does no more than require a generic computer to perform generic computer functions.” Id. The

claims do “nothing significantly more” than “instruct to apply the abstract idea of intermediated settlement using some unspecified, generic computer.” Id. at 226.

Also as in Mayo, Alice distinguished the patent held to be patent eligible in Diamond v. Diehr, 450 U.S. at 175 (1981). The patent in Diehr claimed a method for molding raw rubber into cured products using a mathematical formula. Alice, 573 U.S. at 223 (citing Diehr, 450 U.S. at 177-78). The rubber-molding method in Diehr was patentable: because it employed a “well-known” mathematical equation, but it used that equation in a process designed to solve a technological problem in “conventional industry practice.” Id. (quoting Diehr, 450 U.S. at 177-178). The invention in Diehr used a “thermocouple” to record constant temperature measurements inside the rubber mold—something “the industry ha[d] not been able to obtain.” Id. at 178. The temperature measurements were then fed into a computer, which repeatedly recalculated the remaining cure time by using the mathematical equation. Id. at 178–79. These additional steps, “transformed the process into an inventive application of the formula.” Alice, 573 U.S. at 223 (quoting Mayo, 566 U.S. at 76).

The parties do not dispute that the claims that Activision focuses upon in its motions, claim 1 of ‘856 patent, claim 4 of the ‘690 patent, claim 1 of the ‘501 patent, and claim 18 of the ‘998 patent are representative claims of those that remain. D. 281 at 7 n.3; see D. 276 at 8. Since Worlds in its opposition focuses on claim 4 of the ‘690 patent, D. 276 at 8, the Court does so here. Claim 4 of the ‘690 patent, D. 274-01, provides as follows:

1. A method for enabling a first user to interact with other users in a virtual space, wherein the first user and the other users each have an avatar and a client process associated therewith, and wherein each client process is in communication with a server process, wherein the method comprises:
- (a) receiving a position of less than all of the other users' avatars from the server process; and
 - (b) determining, from the received positions, a set of the other users' avatars that are to be displayed to the first user,
- wherein steps (a) and (b) are performed by the client process associated with the first user.
4. The method of claim 1, wherein step (1b) comprises
- (b)(1) determining from the received positions an actual number of the other users' avatars;
 - (b)(2) determining a maximum number of the other users' avatars to be displayed; and
 - (b)(3) comparing the actual number to the maximum number to determine which of the other users' avatars are to be displayed wherein steps (b)(1)–(b)(3) are performed by the client process associated with the first user.

2. Step One: Claims are Directed to an Abstract Idea

As noted above, the first step in the § 101 analysis asks, “whether the claims at issue are directed to one of [the] patent-ineligible concepts,” namely laws of nature, natural phenomena, or abstract ideas. Alice, 573 U.S. 208, 216. The parties dispute whether World’s patents are directed to patent-ineligible concepts, namely the abstract idea of “filtering” (here of “position information”) which amounts to “crowd control.” D. 276 at 6; D. 281 at 2 n.2. Worlds contends that their claims are “directed to a novel client-server computer network architecture for 3-D virtual worlds.” Id. This description alone does not convert the patents into patent-eligible inventions. This Court’s Markman Order acknowledged that the claims, including the representative ‘690 patent claim, are designed to accomplish crowd control through filtering (i.e., the “determining” and “receiving” steps), D. 153 at 8-10, See. e.g., D. 274-1 at 5, 13. Worlds maintained its position in this case, D. 281 at 5 (citing Worlds in D. 68 at 4) and in the IPR proceedings that its patents were directed at a method of “crowd control” and that these claims are the filtering function to do so. D. 273 at 15-16 (citing Worlds’ statements and filings before PTAB).

Such filtering is, as Activision asserts, “a fundamental and well-known concept for organizing human activity,” and is patent ineligible. D. 273 at 16; see Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1348 (Fed. Cir. 2016) (agreeing, under step one of the Mayo/Alice analysis that “filtering content is an abstract idea because it is a

longstanding, well-known method of organizing human behavior, similar to concepts previously found to be abstract”). That is, “the claims do nothing more than recite a general client-server computer architecture to perform routine functions of filtering information to address the generic problem of crowd control.” D. 281 at 2.

Such conclusion is consistent with the first-step analysis in Mayo and Alice and the rulings in other patent cases involving filtering information claims. These claims, like those in Mayo, involve a natural phenomenon, that is achieving crowd control thru the filtering of information. As the representative claim, the receiving step of claim 4 of the ‘690 patent is about receiving position information and the determining step tells the relevant audience to determine the maximum number by whatever method and the comparing is to compare the actual number to the determined maximum number to determine which of the other users’ avatars are displayed. The steps are open-ended and instruct the audience to “engage in well-understood, routine, conventional activity.” Mayo, 566 U.S. at 79. That is, “to consider the three steps as an ordered combination adds nothing to the laws of nature that is not already present when the steps are considered separately.” Id. This is true whether focusing on the “maximum number” claims as in the ‘690 patent and ‘558 patent, or the “fewer than all” claim in the ‘856 patent or the “condition” steps in the ‘501 patent and the ‘998 patent.

The rulings in other cases support this conclusion as well. For one example, in Fuzzysharp Techs. Inc. v. Intel Corp., No. 12-cv-4413, 2013 WL 5955668, at *13 (N.D. Cal. Nov. 6, 2013), aff’d, 595 F. Appx 996 (Fed. Cir. 2015), the court addressed claims that stated a method “for reducing the visibility related computation calculations in a certain field of use (such as ‘3-D computer graphics’) followed by method steps to perform the reduction.” Id. at *11. The court there held that the claims were directed to an abstract idea as the patent purported to cover all

applications of such filtering in the field of 3D computer graphics. *Id.* at *11. For another example, in Intellectual Ventures II LLC v. JP Morgan Chase & Co., No. 13-cv-3777, 2015 WL 1941331, at *8 (S.D.N.Y. Apr. 28, 2015), the court considered a patent for a method for filtering a packet of information based upon the contents of two or more such packets. *Id.* at *1. The court in that case concluded that the asserted claims were patent ineligible at step 1 of the Mayo/Alice analysis for three reasons. First, the claim amounted to a “mental process” for filtering a packet of information and does not provide anything “concrete” to make it patent eligible. *Id.* Second, the claim was broad enough to raise “concerns of preemption.” *Id.* Since it is not limited to a particular application, but “covers *all* network filtering by *any* firewall on *any* computer network where an access rule is chosen based upon the data of multiple packets. *Id.* (emphasis in original). Third, the patent fails the “machine-or-transformation” test as it is “neither limited to a particular machine or apparatus, nor does it result in the transformation or creation of an article.” *Id.* at 9. Crowd control in the claims here is an abstract idea similar to those abstract ideas found to be patent ineligible in step one of the Mayo/Alice analysis in these cases. The type of “maximum capacity” filter employed in claim 4 of the ‘690 patent, the representative claim,¹ is directed to solving the problem of crowd control by teaching a computer network architecture to enable multiple users to interact, D. 276 at 7, is an abstract idea, analogous to real-world maximum capacity limits on elevators, at restaurants and other physical spaces typically open to the public.

¹This is true of all of the remaining claims. Claim 1 of the ‘856 patent filters position information for “fewer than all” of the avatars, D. 274-3 at 24. Like claim 4 of the ‘690 patent, the remaining claims of the ‘558 patent are directed to filtering information at a maximum value. D. 274-2 at 14. The claims in the ‘501 patent and the ‘998 patent achieve the filtering by a set of conditions that governs what position information the client receives. D. 274-4 at 23 (‘501 patent); D. 274-5 at 22-23 (‘998 patent). The use of “fewer than all” or “conditions” for the filtering in these claims, however, does not make the claims any less of an abstract idea than the claim 4 of the ‘690 claim as discussed above.

3. Step Two: Inventive Concept

Accordingly, the dispositive issue here is at step 2 of the Mayo/Alice analysis: “do the patent claims add *enough* to their statements of the [natural laws and phenomena] to allow the processes they describe to qualify as patent-eligible processes that *apply* natural laws?” Mayo, 566 U.S. at 74 (emphasis in original). The Court must consider the elements of each asserted claim individually and as an ordered combination of elements to determine if the claim contains a patentable inventive concept. Id. at 74–75. The asserted claims are said to “teach a multistep process whereby a server receives position information of avatars associated with network clients; the server filters the received positions and then sends selected packets to each client,” whereby a client can then further determine which avatars to display. See D. 276 at 18. Worlds argues that the Patents-In-Suit teach a specific approach to a computer network architecture that includes an inventive concept. D. 276 at 17.

The Court does not agree with Worlds that the Patents-In-Suit add the requisite inventive concept even when considering the elements or the ordered combination of elements of each claim. As in Fuzzysharp, 2013 WL 5955668, at *11-12, the claims lack limitation to any specific application, do not add any steps other than “conventional ‘post-solution’ activity to the abstract formula described” and “that the method is to be used on conventional computer components does not make the abstract formula patentable.” Id. Similarly, in Intellectual Ventures II LLC, 2015 WL 1941331, at *9, even considering each of the elements of one of the patents at issue there, the first step merely described the form of information “conventionally sent to a firewall” and the second step “simply calls for ‘generic computer implementation’ of the process,” id., neither of

which provide the inventive concept to convert the abstract idea into a patent eligible process.² The steps of the claims here use only “generic functional language to achieve the purported solution” of filtering of position information for crowd control. See Two-way Media, Ltd. V. Comcast Cable Comms. LLC, 874 F.3d 1329, 1339 (Fed. Cir. 2017). None of the remaining claims are limited to “any specific form or implementation of filtering,” D. 281 at 6, and involve generic computer components, D. 281 at 12. Moreover, there is nothing in the ordering of the steps in the claims (i.e., receiving, determining, comparing) that make them inventive; the “steps are organized in a completely conventional way.” Id. at 1341; see Glasswall Solutions Ltd. v. Clearswift Ltd., 754 F. Appx. 996, 999 (Fed. Cir. 2018) (concluding under step 2 of the Mayo/Alice analysis that the claims “recite steps that do not amount to anything more than an instruction to apply the abstract idea of filtering nonconforming data and regenerating a file without it, plus the generic steps needed to implement the idea”).

Contrary to Worlds’ suggestion otherwise, the restriction against patenting abstract concepts “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” Mayo, 566 U.S. at 79. That is, the fact that the claims at issue relate

² The ruling as in Bascom, 827 F.3d at 1350, does not warrant another result here. There, the Federal Circuit ruled at step 2 of the Mayo/Alice analysis that the “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” provided the necessary, inventive concept. Id. That is not the case here. The method outlined here, as represented by claim 4 of the ‘690 patent, cannot be said to be as specific. Particularly, claim 4 provides for a method performed by the client process associated with the first user that receives a position of less than all of the other users, determines “a maximum number of the other users’ avatars to be displayed,” and then compares “the actual number to the maximum number to determine which of the other users’ avatars are to be displayed.” D. 274-1. While the “filtering” of the maximum number of other users’ avatars to be displayed involves the client process associated with the first user, no language in the claim suggests that this is done through any sort of “customizable filtering features specific to each end user,” but rather through a generically stated determination of the maximum number of the other users’ avatars to be displayed. This claim, like the other remaining claims, is distinguishable from the inventive concept that the court found in Bascom.

and apply to the technological environment of a three-dimensional virtual world, does not necessarily make the process inventive. See Bascom, 827 F.3d at 1349 (noting that the requisite inventive concept “cannot simply be an instruction to implement or apply the abstract idea on a computer”). Client-server networks, virtual worlds, avatars, or position and orientation information are not inventions of Worlds but rather, their patents seek to demonstrate their use in a technological environment. D. 273 at 13; see Accenture Global Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336, 1338 (Fed. Cir. 2013) (involving claims with generic computer elements found to be invalid). That is, Worlds’ asserted claims use a general-purpose computer to employ well known filtering or crowd control methods and means that ultimately use same to display graphical results and generate a view of the virtual world, none of which is inherently inventive or sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application. Alice, 573 U.S. at 211. For all these reasons, the remaining claims do not involve the inventive concept necessary to convert the abstract idea into a patent eligible process,³ and they are, therefore, invalid as a matter of law under 35 U.S.C. § 101.

V. Conclusion

For the foregoing reasons, the Court **ALLOWS** Activision’s motion for summary judgment, D. 272.

So Ordered.

/s/ Denise J. Casper
United States District Judge

³ This is true not just true of claim 4 of the ‘690 as the representative claim, but also of the other remaining claims including those claims that teach filtering of position information by “fewer than all” or conditions on the filtering which, when considered per claim as individual elements or an ordered combination of elements, do not provide the necessary inventive concept.