

**United States Court of Appeals
for the Federal Circuit**

BOT M8 LLC,
Plaintiff-Appellant

v.

**SONY CORPORATION OF AMERICA, SONY
CORPORATION, SONY INTERACTIVE
ENTERTAINMENT LLC,**
Defendants-Appellees

2020-2218

Appeal from the United States District Court for the
Northern District of California in No. 3:19-cv-07027-WHA,
Judge William H. Alsup.

Decided: July 13, 2021

PAUL J. ANDRE, Kramer Levin Naftalis & Frankel LLP,
Menlo Park, CA, argued for plaintiff-appellant. Also rep-
resented by JAMES R. HANNAH, LISA KOBIALKA; AARON M.
FRANKEL, CRISTINA MARTINEZ, New York, NY.

JOHN C. O'QUINN, Kirkland & Ellis LLP, Washington,
DC, argued for defendants-appellees. Also represented by
CALVIN ALEXANDER SHANK; GREG AROVAS, New York, NY;
DAVID ROKACH, Chicago, IL.

Before DYK, LINN, and O'MALLEY, *Circuit Judges*.

O'MALLEY, *Circuit Judge*.

Once more, we address the stringency of pleading requirements in cases alleging patent infringement. Once more, we explain that patentees need not prove their case at the pleading stage. See *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1339 (Fed. Cir. 2012) (citing *Skinner v. Switzer*, 562 U.S. 521, 529–30 (2011));¹ *Nalco Co. v. Chem-Mod, LLC*, 883 F.3d 1337, 1350 (Fed. Cir. 2018). And we, once more, explain that, while a patentee's pleading obligations are not insurmountable, a patentee may subject its claims to early dismissal by pleading facts that are inconsistent with the requirements of its claims. See *Nalco*, 883 F.3d at 1348–50.

Bot M8 LLC (“Bot M8”) filed suit against Sony Corporation of America, et al. (“Sony”) in the United States District Court for the Southern District of New York, alleging infringement of six patents, five of which remain at issue on appeal: U.S. Patent Nos. 8,078,540 (“the ’540 patent”); 8,095,990 (“the ’990 patent”); 7,664,988 (“the ’988 patent”); 8,112,670 (“the ’670 patent”); and 7,338,363 (“the ’363 patent”) (collectively, “the asserted patents”).

After the case was transferred to the United States District Court for the Northern District of California, the district court held a case management conference, during which Bot M8 agreed to file an amended complaint. Bot

¹ Although one portion of the decision in *Bill of Lading* dealt with Federal Rule of Civil Procedure 84 and its attendant Form 18, both of which have been eliminated from the Federal Rules, the portion of the decision addressing pleading obligations not governed by Form 18 remains governing precedent.

M8 filed a first amended complaint and Sony moved to dismiss for failure to state a claim. The district court granted dismissal as to the '540, '990, '988, and '670 patents. The court subsequently denied Bot M8's motion for leave to file a second amended complaint. Bot M8 moved for reconsideration, which the district court also denied.

As to the '363 patent, Sony moved for summary judgment, arguing that claim 1 is invalid under 35 U.S.C. § 101. The district court agreed, and granted Sony's motion for summary judgment. The parties entered into a joint stipulation dismissing the remaining claims and the district court entered final judgment.

Bot M8 appeals from the district court's final judgment and from several underlying orders and decisions. In particular, Bot M8 appeals the district court's orders: (1) "directing" Bot M8 to file a first amended complaint; (2) dismissing Bot M8's claims of infringement of the '540, '990, '988, and '670 patents; (3) denying Bot M8's motion to file a second amended complaint, as well as the subsequent order denying leave to move for reconsideration; and (4) granting summary judgment as to the '363 patent. See *Bot M8 LLC v. Sony Corp.*, No. C19-07027, 2020 WL 418938 (N.D. Cal. Jan. 27, 2020) ("*Order on Mot. to Dismiss*"); *Bot M8 LLC v. Sony Corp.*, No. C19-07027, 2020 WL 1643692 (N.D. Cal. Apr. 2, 2020) ("*Order Den. Mot. to Amend*"); *Bot M8 LLC v. Sony Corp.*, No. C19-07027, 2020 WL 1904102 (N.D. Cal. Apr. 16, 2020) ("*Order Den. Leave to Move for Recons.*"); *Bot M8 LLC v. Sony Corp.*, No. C19-07027, 465 F.Supp.3d 1013 (N.D. Cal. 2020) ("*Order on Summ. J.*").

To the extent the district court characterized its colloquy with counsel during the case management conference as "directing" Bot M8 to file a first amended complaint, we find no abuse of discretion in that decision. Nor do we find any error in the district court's decision dismissing Bot M8's claims as to the '540 and '990 patents for failure to

state a plausible claim of infringement. With respect to the '988 and '670 patents, however, we conclude that the district court erred in finding Bot M8's infringement allegations insufficient.

On this record, we find that the district court acted within its discretion in denying Bot M8 leave to file a second amended complaint and in denying reconsideration of that decision. Finally, we agree with the district court that claim 1 of the '363 patent is invalid under § 101.

We therefore affirm in part, reverse in part, and remand to the district court for further proceedings as to the '988 and '670 patents.

I. BACKGROUND

A. The Asserted Patents

Bot M8 is the assignee on all five of the asserted patents. The asserted patents relate to gaming machines and are directed to casino, arcade, and video games generally.

The '540 patent relates to an authentication mechanism to verify that a game program has not been manipulated. In relevant part, the '540 patent requires that a "game program for executing a game" and an "authentication program for authenticating the game program" are stored on the same "board including a memory," which is separate from the motherboard and its memory. '540 patent, col. 12, ll. 64–col. 13, ll. 5.

The '990 patent likewise relates to a gaming machine and requires storing gaming information and a mutual authentication program on the same medium. Specifically, the '990 patent claims an "authentication unit" that authenticates "gaming information," and a separate "mutual authentication unit" that authenticates the "authentication program." '990 patent, col. 17, ll. 23–31. The claims require "a removable storage medium storing therein gaming information including a mutual authentication

program,” with “the mutual authentication program [being] included in the gaming information authenticated by the authentication unit.” *Id.* at col. 17, ll. 6–8, 29–31.

The ’988 and ’670 patents generally relate to a gaming device with a fault inspection program. In both patents, execution of the “fault inspection program” must be completed “before the game is started.” *See* ’988 patent, col. 5, ll. 1–5; ’670 patent, col. 5, ll. 4–7.

Finally, the ’363 patent describes a gaming machine that changes future game conditions based on players’ prior game results. Generally, claim 1 recites a machine that sets an initial “specification value,” which is a value that controls game conditions, and then “renew[s]” that value based on “a total game result” achieved by the claimed machine and a second recited machine. *See* ’363 patent, col. 23, l. 61–col. 24, l. 15. These machines have various components that locate other players, set a “specification value,” transmit game results to a server, receive total game results, which aggregate game results from the players, and then update the game conditions by setting a new specification value based on the aggregate game results. *See id.* The claimed machines can send game results to a server over “a public phone line network, a cellular phone line network, a local area network (LAN), or the like.” *Id.* at col. 10, ll. 30–36.

B. Sony’s Products

Bot M8 accused Sony’s PlayStation 4 (“PS4”) video game consoles and aspects of Sony’s PlayStation network of infringing the ’540, ’990, ’988, and ’670 patents. Bot M8 also accused certain PS4 videogames of infringing the ’363 patent. Sony relies on a variety of authentication and copyright protection technologies to prevent unauthorized use of the PS4 and copying of PS4 games.

C. Procedural History

As noted, Bot M8 initially sued Sony in the Southern District of New York. Sony filed an answer, asserting non-infringement of the asserted patents and arguing that “the Complaint fails to identify legitimate theories for how the claim limitations of the patents-in-suit are allegedly satisfied.” J.A. 504. Sony also moved to transfer the case to the Northern District of California. The New York district court granted Sony’s motion and transferred the case to California. Sony did not move to dismiss the complaint for failure to state a claim and did not seek a more definite statement of the claims.

After the case was transferred, the district court held a case management conference on November 21, 2019. During that conference, the court sua sponte directed Bot M8 to file an amended complaint specifying “every element of every claim that you say is infringed and/or explain why it can’t be done.” *Order on Mot. to Dismiss*, 2020 WL 418938, at *1. The court instructed Bot M8 that, “if this is a product you can buy on the market and reverse engineer, you have got to do that.” *Id.* Counsel for Bot M8 responded that they “would be happy to put in an Amended Complaint with claim charts” and “element-by-element” allegations. J.A. 533 at 3:10–18. Bot M8 further explained that reverse engineering would not be a problem because it had already “torn down the Sony PlayStation.” *Order on Mot. to Dismiss*, 2020 WL 418938, at *1. Pursuant to Rule 16 of the Federal Rules of Civil Procedure, the court set a deadline of December 5, 2019 for Bot M8 to file its amended complaint.

1. First Amended Complaint

On December 5, 2019, Bot M8 timely filed a 223-page first amended complaint (“FAC”). This time, Sony did move to dismiss. The district court held oral argument on Sony’s motion on January 23, 2020. At the hearing, the court questioned why Bot M8 had not cited to Sony’s source

code in the FAC, a failing Sony did not identify in its motion to dismiss. J.A. 1541 at 20:16–17 (“Why can’t you buy one of these products and take whatever code is on there off and analyze it?”). In response, Bot M8 indicated that the PS4 source code is not publicly available and that the software on the PS4 is encrypted and protected by Sony’s access control technology.

In a decision dated January 27, 2020, the district court granted Sony’s motion to dismiss as to the ’540, ’990, ’988 and ’670 patents.² For the ’540 patent—which describes an authentication mechanism for video games—the district court found that “the complaint fails to allege *when* or *where* the game program and authentication program are stored *together* on the same memory board.” *Order on Mot. to Dismiss*, 2020 WL 418938, at *2.

Likewise, for the ’990 patent—which describes a mutual authentication mechanism for video games—the court found that “the complaint fails to allege *when* or *where* the game program and mutual authentication program are stored *together*.” *Id.* at *3. Although Bot M8 pointed to an assertion in the complaint that the “game program on the hard drive or disc contains a mutual authentication process,” the court explained that “allegations that track the claim language that closely are conclusory and require support not found in the substantive allegations.” *Id.* Because the allegations “do not address where the game program is stored,” the court found them insufficient. *Id.*

For the ’988 and ’670 patents—which describe computer program fault inspection—the court found that “the complaint provides no basis to infer the proper timing of the inspection”—*i.e.*, whether a “fault inspection program” is “completed before the game starts.” *Id.* at *4. The court

² The court denied Sony’s motion to dismiss as to the ’363 patent, however.

explained that Bot M8's "allegation too closely tracks the claim language to be entitled to the presumption of truth," and "[n]o underlying allegations of fact are offered." *Id.*

At the end of its decision, the district court explained that Bot M8 "already enjoyed its one free amendment under the rules" and was instructed to "plead well, element-by-element." *Order on Mot. to Dismiss*, 2020 WL 418938, at *6. Although the court stated that Bot M8 "does not deserve yet another chance to re-plead," the court nevertheless gave Bot M8 until February 13, 2020 to do so. *Id.* The court added that, if Bot M8 "move[d] for leave to file yet another amended complaint, it should be sure to plead its best case." *Id.*

Two days after the district court issued its order on the motion to dismiss, it held a discovery hearing where Bot M8 raised, for the first time, concerns about the legality of reverse engineering the PS4's software, otherwise known as "jailbreaking." During the hearing, counsel for Bot M8 explained that they had not previously reverse engineered the PS4 to support the prior pleadings because "jailbreaking" the PS4 is illegal under the Digital Millennium Copyright Act ("DMCA") and other anti-hacking statutes. In response, the district court asked Sony to give Bot M8 "permission, for whatever good it is" to reverse engineer the PS4, which Sony agreed to do. J.A. 1561–63.

2. Motion for Leave to Amend

On February 13, 2020, Bot M8 filed a motion for leave to amend its complaint and attached a redlined version of its proposed Second Amended Complaint ("SAC"). Bot M8 explained that the SAC was based on new evidence obtained only after it was authorized to "jailbreak" the PS4.

Though Bot M8 moved for leave to file the SAC within the time frame authorized by the district court, the court still denied Bot M8's motion for lack of diligence. The district court found that Bot M8 should have done the

“jailbreak” of the PS4 and included that evidence in the FAC. At the outset, the court explained that Bot M8’s motion was governed by Rule 16 of the Federal Rules of Civil Procedure, which permits modification “only for good cause.” *Order Den. Mot. to Am.*, 2020 WL 1643692, at *2. The court found that, “[f]or nine weeks” after the November 21 case management conference, Bot M8 “raised no concerns about its ability to reverse engineer the [PS4]” and said “not a word about the DMCA or anti-hacking statutes.” *Id.* Indeed, at that initial conference, Bot M8 represented that it already had reverse engineered the PS4. Further, Bot M8 never cited any authority supporting its “professed fear of the DMCA or other anti-hacking statutes.” *Id.* at *3 (“[T]here remains no basis for either patent owner’s fears or its failure to timely raise them.”). Because Bot M8’s amendments “could have, and should have, been included in the December 5 amended complaint,” the court found the proposed amendments untimely. *Id.*

3. Motion for Reconsideration

Bot M8 sought leave to move for reconsideration of the court’s order denying leave to amend. In doing so, Bot M8 reiterated its position that it could not have reverse engineered the PS4 before obtaining permission to disable the PS4’s access control technology in light of the DMCA, other anti-hacking statutes, and the Sony customer license agreement.

The district court denied the motion, finding that Bot M8’s “theory of the [DMCA] crossing paths with patent rights remain[ed] unsupported by caselaw,” and Bot M8 “offer[ed] no binding decision directing a different pleading or amendment standard.” *Order Den. Leave to Move for Recons.*, 2020 WL 1904102, at *1. The court also reminded Bot M8 that it was directed to reverse engineer the PS4 at the initial case management conference and that Bot M8 had agreed to do so. Given the record, the court found that

Bot M8 was not entitled to the “extraordinary relief” of reconsideration. *Id.*

4. Summary Judgment under 35 U.S.C. § 101

Both parties filed motions for summary judgment as to claim 1 of the ’363 patent. Bot M8 moved for summary judgment of infringement and Sony moved for summary judgment of non-infringement and patent ineligibility under 35 U.S.C. § 101. Applying the two-part test set forth in *Alice Corp. v. CLS Bank International*, 573 U.S. 208, 217–18 (2014), the district court found claim 1 of the ’363 patent ineligible.

At *Alice* step one, the court found that claim 1 recites “the abstract idea of increasing or decreasing the risk-to-reward ratio, or more broadly the difficulty, of a multiplayer game based upon previous aggregate results.” *Order on Summ. J.*, 465 F. Supp. 3d at 1020. The court explained that updating future “game conditions based on past results to keep players engaged” is “a result, not a means to achieve it[,]” and the ’363 patent provides “no explanation how to accomplish the result.” *Id.* at 1021.

At *Alice* step two, the court concluded that “claim 1 offers no inventive concept.” *Id.* at 1024. The court held that each claim element “invoke[s] no more than ‘generic and functional hardware’ to accomplish their abstract tasks.” *Id.* at 1025. And, “[t]hough given special names, each part remains a generic computer part invoked to effect the conventional computer task of gathering, manipulating, transmitting, and using data.” *Id.* The court further held that, “[e]ven taken as an ordered combination, the elements fail to transform the claimed abstract concept” because “the functionally described parts do only conventional computer tasks” without “offer[ing] something more.” *Id.* at 1025–26.

Bot M8 submitted two expert declarations to prove inventive concept. The first expert, Dr. Stacy Friedman,

“admitted the video game field knew well how to connect multiple game machines, aggregate results, and change game parameters before the ’363 patent.” *Id.* at 1027. The second expert, Dr. Ian Cullimore, “could articulate no specific inventive concept in claim 1 of the ’363 patent other than [a generic reference to] ‘the totality’ based on his expert report” and “effectively admitted that he could not articulate anything unconventional about the ’363 patent’s disclosure of changing the game parameters during play.” *Id.* The court concluded that Bot M8’s expert testimony was thus insufficient “to forestall summary judgment.” *Id.*

Given the district court’s decisions, the parties entered into a Joint Stipulation Regarding Case Management and Dismissal, dismissing the remaining claims without prejudice, with Bot M8 reserving the right to appeal the district court’s various orders. The district court entered final judgment in favor of Sony on August 19, 2020. Bot M8 timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

A. The ’540, ’990, ’988, and ’670 Patents

As noted, the district court dismissed Bot M8’s allegations related to the ’540, ’990, ’988, and ’670 patents for failure to sufficiently state a claim of infringement. On appeal, Bot M8 alleges that the district court erred in *sua sponte* requiring an amended complaint. Bot M8 also argues that the district court erred in dismissing its FAC and abused its discretion by denying Bot M8 leave to amend the FAC. We address each issue in turn.

1. Amending the Original Complaint

At the outset, Bot M8 argues that “the district court erred in *sua sponte* forcing Bot M8 to replead” its original complaint. Appellant’s Br. 23. We find Bot M8’s arguments unpersuasive.

First, while the district court made its impression of Bot M8's original complaint clear, it did not force Bot M8 to replead. The record reveals that, during the November 21, 2019 case management conference, the court told counsel for Bot M8 that it would give Bot M8 "another chance to plead if [it] want[ed] to try again; but, otherwise, [the court was] going to let [Sony] bring a Motion to Dismiss." J.A. 533 at 3:7–9. Counsel indicated that Bot M8 "would be happy to put in an Amended Complaint with claim charts"—particularly given that it had already "torn down the Sony PlayStation." *Id.* at 3:10–12. Bot M8 therefore chose to file an amended complaint rather than defend its original complaint; it was not forced to do so.

Second, Ninth Circuit law is clear that "[a] trial court may act on its own initiative to note the inadequacy of a complaint and dismiss it for failure to state a claim" if it "give[s] notice of its intention to dismiss and give[s] the plaintiff some opportunity to respond unless the 'plaintiffs cannot possibly win relief.'" *Sparling v. Hoffman Constr. Co.*, 864 F.2d 635, 638 (9th Cir. 1988) (quoting *Wong v. Bell*, 642 F.2d 359, 361 (9th Cir. 1981)). Accordingly, the district court had the authority to request an amended complaint, and the court's procedure here was fair—it gave Bot M8 the option to re-plead or respond to any motion from Sony. That Bot M8 agreed to put together the requested claim chart at the case management conference weighs against Bot M8's objections on appeal. We therefore find no error in the court's decision directing Bot M8 to file the FAC.

2. Dismissal of the FAC

Federal Rule of Civil Procedure 8(a)(2) "generally requires only a plausible 'short and plain' statement of the plaintiff's claim," showing that the plaintiff is entitled to relief. *Skinner*, 562 U.S. at 530. To survive a motion to dismiss under Rule 12(b)(6), a complaint must "contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Ashcroft v. Iqbal*, 556

U.S. 662, 678 (2009) (quoting *Bell v. Twombly*, 550 U.S. 544, 570 (2007)). “A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Id.* “Threadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice.” *Id.* (citing *Twombly*, 550 U.S. at 555). “Determining whether a complaint states a plausible claim for relief [is] a context-specific task that requires the reviewing court to draw on its judicial experience and common sense.” *Id.* at 679.

Here, the district court instructed counsel for Bot M8 that it must “explain in [the] complaint every element of every claim that you say is infringed and/or explain why it can’t be done.” J.A. 532 at 2:21–24. We disagree with the district court’s approach and reiterate that a plaintiff “need not ‘prove its case at the pleading stage.’” *Nalco*, 883 F.3d at 1350 (quoting *Bill of Lading*, 681 F.3d at 1339). A plaintiff is not required to plead infringement on an element-by-element basis. *Id.* (“[T]he Federal Rules of Civil Procedure do not require a plaintiff to plead facts establishing that each element of an asserted claim is met.”); see *Disc Disease Sols. Inc. v. VGH Sols., Inc.*, 888 F.3d 1256, 1260 (Fed. Cir. 2018) (finding that a plaintiff need not plead every element, but must only give the alleged infringer fair notice of infringement). Instead, it is enough “that a complaint place the alleged infringer ‘on notice of what activity . . . is being accused of infringement.’” *Lifetime Indus., Inc. v. Trim-Lok, Inc.*, 869 F.3d 1372, 1379 (Fed. Cir. 2017) (quoting *K-Tech Telecomms., Inc. v. Time Warner Cable, Inc.*, 714 F.3d 1277, 1284 (Fed. Cir. 2013)). To the extent this district court and others have adopted a blanket element-by-element pleading standard for patent infringement, that approach is unsupported and goes beyond the standard the Supreme Court articulated in *Iqbal* and *Twombly*. See *Twombly*, 550 U.S. at 556 (“[A] well-pleaded complaint may proceed even if it strikes a savvy judge that actual

proof of those facts is improbable, and that a recovery is very remote and unlikely.”) (internal quotation marks and citation omitted).

The relevant inquiry under *Iqbal/Twombly* is whether the factual allegations in the complaint are sufficient to show that the plaintiff has a plausible claim for relief. *Iqbal*, 556 U.S. at 679. “The plausibility standard is not akin to a ‘probability requirement,’ but it asks for more than a sheer possibility that a defendant has acted unlawfully.” *Id.* at 678. In other words, a plausible claim must do more than merely allege entitlement to relief; it must support the grounds for that entitlement with sufficient factual content. *Id.* “[A] plaintiff’s obligation to provide the ‘grounds’ of his ‘entitle[ment] to relief’ requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do.” *Twombly*, 550 U.S. at 555. The level of detail required in any given case will vary depending upon a number of factors, including the complexity of the technology, the materiality of any given element to practicing the asserted claim(s), and the nature of the allegedly infringing device.

Accordingly, a plaintiff cannot assert a plausible claim for infringement under the *Iqbal/Twombly* standard by reciting the claim elements and merely concluding that the accused product has those elements. There must be some factual allegations that, when taken as true, articulate why it is plausible that the accused product infringes the patent claim. While the Supreme Court has said that “[f]actual allegations must be enough to raise a right to relief above the speculative level,” *Twombly*, 550 U.S. at 555, it has also indicated that “[s]pecific facts are not necessary; the statement need only ‘give the defendant fair notice of what the . . . claim is and the grounds upon which it rests,’” *Erickson v. Pardus*, 551 U.S. 89, 93 (2007) (quoting *Twombly*, 550 U.S. at 555).

Having clarified the appropriate standard, we turn to the district court's decision on Sony's motion to dismiss. The district court dismissed Bot M8's claims as to the '540, '990, '988, and '670 patents for lack of sufficient factual allegations. We review a district court's Rule 12(b)(6) dismissal under the law of the regional circuit. *Juniper Networks, Inc. v. Shipley*, 643 F.3d 1346, 1350 (Fed. Cir. 2011). Applying Ninth Circuit law, we review "dismissals for failure to state a claim without deference." *Id.* In doing so, "we accept all factual allegations in the complaint as true and construe the pleadings in the light most favorable to" Bot M8. *Knieval v. ESPN*, 393 F.3d 1068, 1072 (9th Cir. 2005); *see also Bill of Lading*, 681 F.3d at 1340.

As explained below, while we agree with the district court that Bot M8's allegations as to the '540 and '990 patents were conclusory and at times contradictory, we find that the court erred in dismissing the allegations as to the '988 and '670 patents. With respect to the '988 and '670 patents, the court simply required too much.

a. The '540 Patent

Claim 1 of the '540 patent requires "a board including a memory in which a game program . . . and an authentication program . . . are stored" separate from "a motherboard" ("the board limitation"). '540 patent, col. 12, l. 65–col. 13, l. 5. The district court found Bot M8's allegations insufficient because the FAC "fails to plausibly plead the shared location of the game and authentication programs according to claim 1 of the '540 patent." *Order on Mot. to Dismiss*, 2020 WL 418938, at *3.

On appeal, Bot M8 contends that the FAC describes how the PS4 meets all elements of the '540 patent with "fourteen pages of factual allegations" and "fifteen pages of claim charts applying the publicly available evidence to the claim elements." Appellant's Br. 29. Specifically, Bot M8 argues that its FAC identified three different components that independently satisfy the board limitation: (1) the

PS4's internal hard drive; (2) PS4 Blu-ray discs; and (3) PlayStation Network Servers. According to Bot M8, these allegations alone provide Sony with the requisite fair notice of its infringement claim with respect to the '540 patent.

Sony responds that Bot M8's FAC failed to plausibly plead that the shared location of the game and authentication programs is any of the three components that Bot M8 identified. Sony further submits that the FAC actually alleges *away* from infringement by asserting that the purported "authentication program" is stored on the PS4 motherboard—an allegation that is inconsistent with Bot M8's infringement theory. As explained below, because we agree with Sony on its second point, we need not address the first in any detail, except to reiterate that conclusory allegations are insufficient.

While a plaintiff need not prove infringement at the pleading stage, here, the FAC contains too much rather than too little, to the point that Bot M8 has essentially pleaded itself out of court. While Bot M8 repeatedly emphasizes the number of pages in its FAC, it is the *quality* of the allegations, not the *quantity*, that matters. And unfortunately for Bot M8, its allegations, which take a "kitchen sink" approach to pleading, reveal an inconsistency that is fatal to its infringement case with respect to the '540 patent.

Claim 1 of the '540 patent requires that a "game program for executing a game" and an "authentication program for authenticating the game program" are stored on the *same* "board including a memory," *separate* from the "motherboard" and its memory. '540 patent, col. 12, l. 65–col. 13, l. 5. In the FAC, however, Bot M8 asserts that "[t]he authentication program for the PlayStation 4 hard drive, Operating System, and games is stored on PlayStation 4 MX25L25635FMI 256Mb Serial Flash Memory," which is allegedly in the PS4 "motherboard."

J.A. 633; *see* J.A. 630 (“The PlayStation 4 motherboard contains flash memory. The CMOS Serial Flash Memory . . . is a Macronix MX25L25635FMI 256Mb Serial Flash Memory chip.”). That allegation renders Bot M8’s infringement claim not even possible, much less plausible. While claim 1 requires that the game program and authentication program be stored together, separately from the motherboard, the FAC alleges that the authentication program is located on the PS4 motherboard itself.

Under *Iqbal/Twombly*, allegations that are “merely consistent with” infringement are insufficient. *Twombly*, 550 U.S. at 557. Where, as here, the factual allegations are actually *inconsistent* with and contradict infringement, they are likewise insufficient to state a plausible claim.³ As we have said before, while a plaintiff’s pleading obligations are not onerous, it is possible that, in pleading its claims, a plaintiff may find it has pleaded itself out of court. *See Nalco*, 883 F.3d at 1348–50. We agree with the district court that Bot M8 failed to provide factual allegations supporting a plausible inference that the PS4 infringes claim 1 of the ’540 patent. We therefore find no error in the district court’s decision dismissing Bot M8’s infringement claims as to the ’540 patent.

b. The ’990 Patent

The ’990 patent describes a “mutual authentication” program for video games. The claims require storing “gaming information including a mutual authentication program” on the same memory, referred to as the “removable storage medium” (“the mutual authentication limitation”). *See* ’990 patent, col. 17, ll. 6–8. As with the ’540 patent, the district court found that the FAC “fails to allege *when* or *where* the game program and mutual authentication

³ Notably, Bot M8’s allegations were not pled in the alternative.

program are stored *together*.” *Order on Mot. to Dismiss*, 2020 WL 418938, at *3.

According to Bot M8, the FAC alleges four different storage components that satisfy the mutual authentication limitation: (1) the PS4’s hard drives; (2) Blu-ray game discs; (3) PlayStation Network Servers; and (4) flash memory on the PS4 console. On appeal, Bot M8 argues that the district court ignored its factual allegations because they were not supported by source-code-level evidence. While we agree with Bot M8 that there is no requirement to provide source code at the pleadings stage, and that the district court was wrong to demand that it do so, we disagree that it was the absence of source code that prompted dismissal. Instead, the district court found that Bot M8 failed to offer factual allegations that support a plausible inference that the PS4 actually stores the gaming information and mutual authentication program together. *Id.* While Bot M8 points to different storage components in the allegedly infringing devices, it never says which one or ones satisfy the mutual authentication limitation.

We find no error in the district court’s analysis as to the ’990 patent. As noted, mere recitation of claim elements and corresponding conclusions, without supporting factual allegations, is insufficient to satisfy the *Iqbal/Twombly* standard. Although the FAC alleges that the PS4 contains multiple storage media and multiple authentication programs, we agree with the district court that Bot M8’s allegations are conclusory, merely track the claim language, and do not plausibly allege that gaming information and a *mutual* authentication program are stored together on the same memory. *Id.* The district court therefore correctly determined that Bot M8’s allegations do not plausibly allege infringement as to the ’990 patent.

c. The ’988 and ’670 Patents

The ’988 and ’670 patents require a control device that executes a “fault inspection program” and “completes the

execution of the fault inspection program before the game is started” (the “fault inspection limitation”). ’988 patent, col. 4, l. 64–col. 5, l. 5; ’670 patent, col. 5, ll. 1–7. The district court acknowledged that the FAC “plausibly allege[d] the inspection for both the memory device and the game stored therein,” but nonetheless dismissed the claims related to these patents on grounds that Bot M8’s allegations regarding the timing of the inspection too closely tracked the claim language to be deemed plausible. *Order on Mot. to Dismiss*, 2020 WL 418938, at *4 (“[T]he complaint provides no basis to infer the proper timing of the inspection”).

On appeal, Bot M8 argues that the district court erred in its dismissal because the FAC “includes specific evidence demonstrating that the PS4 includes a fault inspection program that concludes prior to a game starting.” Appellant’s Br. 43. In particular, the FAC identifies twelve different error codes that the PS4 displays upon boot up and prior to the game starting. According to Bot M8, those codes and error messages “support a plausible inference that the PS4’s fault inspection program can be concluded prior to the start of a game program.” *Id.*

We agree with Bot M8 that the FAC plausibly alleges infringement of the ’988 and ’670 patents. Bot M8 expressly alleges—at least four different times in the FAC—that the fault inspection program completes before the game is started. J.A. 688 (“The PlayStation CPU will execute the fault inspection program when the gaming device is started to operated [sic] and completed before the game is started.”); J.A. 696 (“The PlayStation CPU will execute the fault inspection program when the gaming device is started to operated [sic] and completed before the game is started.”); J.A. 705 (“The PlayStation CPU will execute the boot program before executing of the fault inspection program when the gaming device is started to operate. The CPU will then execute the fault inspection program and complete execution before the game is started.”); J.A. 716 (“The PlayStation CPU will execute the fault inspection

program when the device is booted up and before the game is started.”).

Sony argues that these allegations are conclusory and track the claim language too closely. But the FAC also identifies specific error messages that are displayed by the PS4 when faults are detected. For example, one alleged error code states: “Cannot start the PS4. Cannot access system storage.” J.A. 687 (alleging that the “PlayStation 4 CPU will report various error codes if there is a problem detected while running the fault inspection program to inspect the second memory device during boot up”). Another alleged error message says that “required information to start the application cannot be found”—an error that seemingly must be resolved before the game is started. J.A. 686. These allegations give rise to a reasonable inference that the fault inspection program is completed before a game starts.

Sony maintains that the passages Bot M8 relies upon fail to allege that execution of a fault inspection program completes before a game starts. According to Sony, “[a]lthough these allegations may suggest that execution of an alleged fault inspection program commences during startup, they say nothing about whether it completes execution before a game starts.” Appellee’s Br. 52. We find that Sony—like the district court—demands too much at this stage of the proceedings. Bot M8 need not “prove its case at the pleading stage.” *Nalco*, 883 F.3d at 1350 (citation omitted). The FAC plausibly alleges that the PS4 completes its execution of the fault inspection program before the game is started and supports those assertions with specific factual allegations. Nothing more is required. Accordingly, we find that the district court erred in dismissing Bot M8’s claims as to the ’988 and ’670 patents.

3. Denial of Leave to Amend the FAC

We next address whether the district court properly denied leave to amend. While we have concluded that the

FAC was sufficient as to the '988 and '670 patents, we conclude that leave to amend was properly denied as to all four patents.

After the district court dismissed the FAC as to the '540, '990, '988, and '670 patents, Bot M8 sought leave to file another amended complaint and submitted a proposed SAC. Bot M8 maintained that amendment was necessary because the DMCA and other anti-hacking statutes restrained its earlier reverse engineering efforts. The district court denied the motion. In doing so, the court explained that, where the court has imposed a deadline, Rule 16(b)(4) permits modification “only for good cause,” and the central inquiry is “whether the requesting party was diligent in seeking the amendment.” *Order Den. Mot. to Amend*, 2020 WL 1643692, at *2. Because Bot M8 did not raise any concerns about its ability to reverse engineer the PS4 until after the district court issued its decision on Sony’s motion to dismiss, the court found that Bot M8 was not diligent. *Id.*

In denying leave to amend, the district court found no authority to support Bot M8’s belated “fear of the DMCA or other anti-hacking statutes” and no explanation for why Bot M8 failed to raise its concerns at the November 21 case management conference where it represented to the court that it had already “torn down the Sony PlayStation.” *Id.* at *3. Because it believed the proposed amendments should have been included in Bot M8’s FAC, the court found them untimely. The court subsequently denied Bot M8’s request for reconsideration, noting that it had “directed *reverse engineering* of the Sony PlayStation 4 at the November 21, 2019, case management conference.” *Order Den. Leave to Move for Recons.*, 2020 WL 1904102, at *1.

On appeal, Bot M8 submits that the district court abused its discretion in denying leave to amend. Bot M8 maintains that it “sought leave to amend in view of new evidence uncovered after obtaining permission to jailbreak the PS4 and then deciphering its software.” Appellant’s Br.

47. According to Bot M8, the district court should have reviewed the motion using Rule 15(a)'s liberal amendment policy—not the “good cause” standard of Rule 16—because the court’s order on the motion to dismiss gave until February 13, 2020 to seek leave to amend and Bot M8 complied with that deadline. Bot M8 also argues that, because it filed the motion for leave to amend less than three weeks after the court dismissed the FAC, and “within two weeks of obtaining permission to jailbreak the PS4,” the court abused its discretion in denying the motion. *Id.* at 49.

We apply regional circuit law to district court “procedural decisions that relate to issues not unique to our exclusive jurisdiction, including motions for leave to amend.” *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1354 (Fed. Cir. 2009). Under Ninth Circuit law, a district court’s denial of leave to amend a pleading after the deadline has passed is reviewed for an abuse of discretion. *Id.* Where, as here, a party seeks leave to amend after the deadline set in the scheduling order has passed, Federal Rule of Civil Procedure 16 applies to motions to amend the pleadings. *Id.*⁴ Rule 16 provides that “[a] schedule may be modified only for good cause and with the judge’s consent.” Fed. R. Civ. P. 16(b)(4).

While the district court perhaps should not have required reverse engineering of Sony’s products as a prerequisite to pleading claims of infringement (a question we would consider on a case-by-case basis), Bot M8 waived its objection to that obligation when it told the court it was happy to undertake that exercise. The court requested reverse engineering at the November 2019 case management

⁴ After the district court’s November 21, 2019 case management conference, the court issued a case management order setting December 5, 2019 as the deadline for amendment. Bot M8 did not file its motion for leave to amend until February 13, 2020.

conference—two weeks before Bot M8 filed its FAC in December 2019 and twelve weeks before Bot M8 moved for leave to amend in February 2020. At that November conference, Bot M8 did not object to reverse engineering, did not suggest that compliance would be difficult, and did not argue that it needed permission. Instead, Bot M8 represented that it had already “torn down” the PS4 and would be “happy to” put its results into claim charts.

We, thus, are not reviewing the court’s original reverse engineering order at this stage, but may only review the court’s later conclusion that Bot M8 was not diligent in raising its concerns with the reverse engineering order until its request to file the SAC. That ruling presents us with a close question. Were we reviewing that order under Rule 15’s standards, we might well find that the district court abused its discretion in denying leave to amend. And, were we in the district court’s role and considering the request in the first instance, we likely would have allowed the filing of the SAC. But we are faced with neither of those circumstances. Reviewing the district court order on appeal and under Rule 16, we cannot conclude that the district court abused its discretion.

Even if we might have reached a different decision if asked to consider the matter in the first instance, we do not find that the district court abused its discretion in denying leave to amend a second time. *See United States v. Ferguson*, 246 F.3d 129, 133 (2d Cir. 2001) (“[W]e are mindful that a judge has not abused h[is] discretion simply because [he] has made a different decision than we would have made in the first instance.”). We therefore affirm the district court’s denial of Bot M8’s motion to amend its complaint, and its order denying reconsideration of that decision.

B. The ’363 Patent

As to the ’363 patent, the district court granted summary judgment in favor of Sony, finding claim 1 ineligible

under § 101. We review a district court’s summary judgment decision under the law of the regional circuit. *Ericsson v. TCL Commc’ns Tech. Holdings*, 955 F.3d 1317, 1324 (Fed. Cir. 2020). The Ninth Circuit “reviews de novo a district court’s grant of summary judgment.” *Monzon v. City of Murrieta*, 978 F.3d 1150, 1155 (9th Cir. 2020). “[P]atent eligibility under §101 is a question of law that we review without deference.” *Ericsson*, 955 F.3d at 1325.

Here, the district court found that claim 1 of the ’363 patent is directed to an abstract idea and lacks any inventive concept. Specifically, the court found that claim 1 “recites the abstract idea of increasing or decreasing the risk-to-reward ratio, or more broadly the difficulty, of a multiplayer game based upon previous aggregate results. But the claim leaves open *how* to accomplish this, and the specification provides hardly any more direction.” *Order on Summ. J.*, 465 F. Supp. 3d at 1020. The court further found that the “claim merely recites result-oriented uses of conventional computer devices” and that, “[a]t bottom, neither the patent specification, patent owner, or patent owner’s experts articulate a technological problem solved by the ’363 patent.” *Id.*

On appeal, Bot M8 argues that the court erred in finding claim 1 “to be directed to an abstract idea” and further erred in finding that it “was nothing more than an application of conventional gaming technology.” Appellant’s Br. 22–23. We disagree. After careful consideration, we discern no error in the district court’s § 101 analysis, and find no need to discuss that analysis in any detail. For the reasons explained by the district court, claim 1 of the ’363 patent is ineligible under § 101.

III. CONCLUSION

For the foregoing reasons, the district court’s judgment is affirmed in part and reversed in part. The case is remanded to the district court for further proceedings regarding infringement of the ’988 and ’670 patents.

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**AFFIRMED IN PART, REVERSED IN PART, AND
REMANDED**

Costs

No costs.