United States Court of Appeals for the Federal Circuit

ACCELERATION BAY LLC,
Plaintiff-Appellant

v.

2K SPORTS, INC., ROCKSTAR GAMES, INC., TAKE-TWO INTERACTIVE SOFTWARE, INC.,
Defendants-Appellees

2020-1700

Appeal from the United States District Court for the District of Delaware in No. 1:16-cv-00455-RGA, Judge Richard G. Andrews.

Decided: October 4, 2021

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

MICHAEL A. TOMASULO, Winston & Strawn LLP, Los Angeles, CA, argued for defendants-appellees. Also represented by DAVID P. ENZMINGER; LOUIS CAMPBELL, Menlo Park, CA; GEOFFREY P. EATON, Washington, DC.

Before MOORE, *Chief Judge*[*], REYNA, and HUGHES, *Circuit Judges*.

REYNA, *Circuit Judge*.

This is an appeal from the U.S. District Court for the District of Delaware's decisions construing certain claim terms in plaintiff-appellant Acceleration Bay LLC's four asserted patents, U.S. Patent Nos. 6,701,344, 6,714,966, 6,910,069, and 6,920,497, and granting defendant-appellees 2K Sports, Inc., Rockstar Games, Inc., and Take-Two Interactive Software, Inc.'s motion for summary judgment of non-infringement. We conclude that Acceleration Bay's appeal is moot with respect to the '344 and '966 patents, and therefore we dismiss the appeal in part for lack of jurisdiction. We further affirm the district court's claim construction of the '069 patent and its grant of summary judgment of non-infringement as to the '069 and '497 patents.

BACKGROUND

The Patents-in-Suit

Acceleration Bay asserted four patents that are at issue in this appeal: U.S. Patent Nos. 6,701,344 ("'344 Patent"), 6,714,966 ("'966 Patent"), 6,910,069 ("'069 Patent"), and 6,920,497 ("'497 Patent"). The patents are unrelated but were filed on the same day, July 31, 2000, and share similar specifications.[1] The patents disclose a networking

---

[*] Chief Judge Kimberly A. Moore assumed the position of Chief Judge on May 22, 2021.

[1] The '069 and '497 patents have identical specifications. The other two patents' specifications differ in that the '344 patent adds a section titled "Distributed Game Environment," *see* '344 patent col. 16 l. 29–col. 17 l. 11, and

technology that allegedly improves upon pre-existing communication techniques because it is "suitable for the simultaneous sharing of information among a large number of the processes that are widely distributed." *See* '344 patent col. 2 ll. 38–41. Specifically, the patents describe a "broadcast technique in which a broadcast channel overlays a point-to-point communications network." *Id.* at col. 4 ll. 3–5.

The '344 and '966 patents' claims at issue—namely claims 12 to 15 of the '344 patent and claims 12 and 13 of the '966 patent—are drawn to networks that provide broadcast channels and information distribution services where participating computers (i.e., nodes) are connected and organized via a virtual network (i.e., overlay network). *See* '344 patent col. 30 ll. 4–32; '966 patent col. 30 ll. 36–57. Pertinent to this subject matter, the patents teach, for example, that an originating computer sends a message to its neighbors on the broadcast channel using point-to-point connections. '344 patent at col. 4 ll. 26–32. Then each computer that receives the message sends it to its neighbors using point-to-point connections. *Id.* at col. 4 ll. 32–34. Requiring the computers to send the message only to their neighbors, rather than to all network participants, improves efficiency and reliability of communication because it reduces both the number of connections that each participant must maintain and the number of messages that each participant must send. *See id.* at col. 4 ll. 23–47; *see also* Appellant's Br. 8–11. The technology also allegedly improves communication by using redundancy to avoid transmission errors. '344 patent col. 7 ll. 50–51 ("The redundancy of the message sending helps to ensure the overall reliability of the broadcast channel."). Claim 12 of the

---

the '966 patent adds a section called "Information Delivery Service," '966 patent col. 16 l. 24–col. 17 l. 26. This opinion cites for convenience to the '344 patent.

'344 patent, which depends from claim 1, is representative of the '344 patent's claims at issue in this case. Those claims recite:

> 1. A computer network for providing a game environment for a plurality of participants,
>
> each participant having connections to at least three neighbor participants,
>
> wherein an originating participant sends data to the other participants by sending the data through each of its connections to its neighbor participants and
>
> wherein each participant sends data that it receives from a neighbor participant to its other neighbor participants,
>
> further wherein the network is m-regular, where m is the exact number of neighbor participants of each participant and
>
> further wherein the number of participants is at least two greater than m thus resulting in a non-complete graph.
>
> 12. The computer network of claim 1 wherein the interconnections of participants form a broadcast channel for a game of interest.

And asserted claims 12 and 13 of the '966 patent are nearly identical to asserted claims 12 and 13 of the '344 patent, containing no differences material to the outcome of the appeal.[2] '966 patent col. 30 ll. 36–57.

---

[2] The '966 patent's asserted claims are different in that they refer to an "information delivery service" rather than a "game environment" or "game system"; "distributing

The '069 patent's claims 1 and 11, at issue in this appeal, are drawn to methods for adding participants to a network. '069 patent col. 28 l. 48–col. 29 l. 25. The method involves, in simple terms, a computer seeking to join the network by contacting what is referred to as a "portal computer" on the network, which then sends a connection request to certain of its neighbors. Claim 1 is representative[3] and recites:

> 1. A computer-based, non-routing table based, non-switch based method for adding a participant to a network of participants, each participant being connected to three or more other participants, the method comprising:
>
> identifying a pair of participants of the network that are connected wherein a seeking participant contacts a fully connected portal computer, which in turn sends an edge connection request to a number of randomly selected neighboring participants to which the seeking participant is to connect;
>
> disconnecting the participants of the identified pair from each other; and
>
> connecting each participant of the identified pair of participants to the seeking participant.

'069 patent col. 28 ll. 48–62.

---

information relating to a topic" rather than "playing a game"; and a "topic" rather than a "game."

[3] Claim 11 depends from claim 1 and recites: "The method of claim 1 wherein the participants are connected via the Internet." '069 patent col. 29 ll. 24–25.

The '497 patent's claims at issue, namely claims 9 and 16, cover a component for locating a call-in port[4] of a portal computer. According to the specification, dialing a port is a "relatively slow process" that takes time for the computer seeking to join the network to locate the call-in port of a portal computer. '497 patent col. 11 ll. 58–60. To speed up the process, the patent teaches using a port ordering algorithm "to identify the port number order that a portal computer should use when finding an available port for its call-in port." *Id.* at col. 11 ll. 60–64. Claim 9 is representative[5] and recites:

> 9. A component in a computer system for locating a call-in port of a portal computer, comprising:
>
> means for identifying the portal computer, the portal computer having a dynamically selected call-in port for communicating with other computers;
>
> means for identifying the call-in port of the identified portal computer by repeatedly trying to establish a connection with the identified portal computer through contacting a communications port or communications ports until a connection is successfully established;
>
> means for selecting the call-in port of the identified portal computer using a port ordering algorithm; and
>
> means for re-ordering the communications ports selected by the port ordering algorithm.

---

[4] The '497 patent explains, for example, that a "call-in port is used to establish connections with the external port and the internal ports." '497 patent col. 6 ll. 40–41.

[5] Claim 16 depends from claim 9 and recites: "The component of claim 9 wherein the communications ports are TCP/IP ports."

Id. at col. 30 ll. 16–30.

Procedural History

On June 17, 2016, Acceleration Bay filed a patent infringement suit against 2K Sports, Inc., Rockstar Games, Inc., and Take-Two Interactive Software, Inc. in the U.S. District Court for the District of Delaware. J.A. 550. Acceleration Bay accused the defendants of directly infringing the '344, '966, '069, and '497 patents, among others, by establishing networks for customers who play the video games called Grand Theft Auto V, NBA 2K15, and 2K16. *See* J.A. 573. Specifically, Acceleration Bay alleged that the accused video games' software creates Take Two's infringing virtual networks. J.A. 573 at ¶ 65; Appellant's Br. 14.

From 2017 to 2018, the district court issued a series of claim construction orders.[6] Pertinent to this appeal, in its August 29, 2017 order, the district court addressed the parties' dispute concerning the proper construction of the term "m-regular," which is a limitation in the claims-at-issue of the '344 and '966 patents. *See* J.A. 16. The district court largely adopted Take Two's proposed construction but revised it to read as follows: "A state that the network is configured to maintain, where each participant is connected to exactly m neighbor participants." *Id.* The district court explained that this construction

> does not require the network to have each participant be connected to m neighbors at all times; rather, the network is configured (or designed) to have each participant be connected to m neighbors.

---

[6] *See* J.A. 3–18 (Aug. 29, 2017 order); J.A. 19–24 (Sept. 6, 2017 order); J.A. 25–49 (Dec. 20, 2017 order); J.A. 50–66 (Dec. 20, 2017 order); J.A. 67–70 (Dec. 28, 2017 order); J.A. 71–93 (Jan. 17, 2018 order); J.A. 94–97 (Jan. 24, 2018 order); J.A. 98–104 (Apr. 10, 2018 order).

> In other words, if the network does not have each participant connected to m neighbors, this is fine so long as, when appropriate, it tries to get to that configuration.

Id.

In the December 20, 2017 claim construction order, the district court construed "fully connected portal computer" in claim 1 of the '069 patent largely consistent with Take Two's proposed construction to mean "portal computer connected to exactly m neighbor participants." J.A. 33. This construction meant, in other words, that the asserted claims effectively included the "m-regular" limitation. *Acceleration Bay LLC v. Take-Two Interactive Software, Inc.*, No. CV 16-455-RGA, 2020 WL 1333131, at *2 n.1 (D. Del. Mar. 23, 2020); J.A. 33–37.

In the same order, the district court construed "each participant being connected to three or more other participants," also appearing in claim 1 of the '069 patent, consistent with Take Two's proposal to mean "each participant being connected to the same number of other participants in the network, where the number is three or more." J.A. 38. The court again explained that this construction effectively included the "m-regular" limitation into the asserted claims of the '069 patent even though it was not explicitly stated. J.A. 38–39.

In its January 17, 2018 claim construction order, the district court construed the following term that appears in claim 9 of the '497 patent: "a *component* in a computer system for locating a call-in port of a portal computer." J.A. 90 (emphasis added). The district court adopted Take Two's construction: "a *hardware* component programmed to located [sic] a call-in port of a portal computer." J.A. 90 (emphasis added). The district court explained that the term requires hardware because Acceleration Bay had agreed in its proposed construction for other disputed terms that the term "component" requires hardware. J.A. 91.

On March 23, 2020, the district court granted summary judgment of non-infringement for all four patents-at-issue. *See Acceleration Bay*, 2020 WL 1333131. The court first addressed Acceleration Bay's theory of direct infringement of the '344, '966, and '497 patents by virtue of Take Two's "making," "selling," and "offering to sell" the accused systems under 35 U.S.C. § 271(a). *Id.* at *4. The court explained that making a system under § 271(a) requires a single entity to combine all the claim elements and that, if a customer, rather than an accused infringer, performs the final step to assemble the system, then the accused infringer has not infringed. *Id.* (citing *Centillion Data Sys., LLC v. Qwest Commc'ns Int'l, Inc.*, 631 F.3d 1279, 1288 (Fed. Cir. 2011)). Applying these principles to the '344 and '966 patents, the court observed that Take Two "make[s] software, not computer networks or broadcast channels" and that its customers must introduce those elements to the systems before the claims can be met. *Id.* at *4. The court also explained that the asserted claims of the '344 and '966 patents require "participants" who form "connections" with each other, and it is therefore the video game players, not Take Two, who assemble the claimed system. *Id.* Turning to the '497 patent, the court explained that Take Two did not meet the "component" limitation in the '497 patent's asserted claims because "customers use their own hardware, such as an Xbox or personal computer, to locate the 'call-in port of a portal computer.'" *Id.*

The district court then rejected Acceleration Bay's "final assembler" infringement theory with respect to the '344, '966, and '497 patents ostensibly based on *Centrak, Inc. v. Sonitor Technologies, Inc.*, 915 F.3d 1360 (Fed. Cir. 2019). *Id.* The district court explained that, in *Centrak*, summary judgment was deemed inappropriate because, "although the defendant's product did not include all the elements of the asserted claims, there was evidence that the defendant installed the accused product for its customers." *Id.* But here, the district court reasoned, Acceleration

Bay "has not alleged Defendants ever installed the video games for customers," and therefore the case was controlled by *Centillion*, "in which the Federal Circuit found the defendant could not have infringed the patents because the customers installed the accused software themselves." *Id.* (citing *Centillion*, 631 F.3d at 1288).

The district court also determined that Take Two did not infringe the '069 patent. The district court recalled that, although the asserted claims of the '069 patent did not explicitly recite an "m-regular" limitation, the court had construed two separate terms, "fully connected portal computer" and "each participant being connected to three or more other participants," as including the "m-regular" limitation. *Acceleration Bay*, 2020 WL 1333131, at *2 & n.1; J.A. 36, 38–39. The district court then explained that the critical question for purposes of the '069 patent was whether the accused video games met the "m-regular" limitation. *Acceleration Bay*, 2020 WL 1333131, at *7. The court determined that Acceleration Bay had not carried its burden of showing a genuine dispute about whether the accused video games are "'configured to maintain' networks where each participant is connected to exactly the same number of other participants," as required by the district court's construction of the term "m-regular." *Id.* Acceleration Bay's experts, in their theories regarding Grand Theft Auto, did not identify "any source code that directs the participants to connect to the same number of other participants." *Id.* at *8. Regarding the NBA 2K video games, the court agreed with Take Two that the video games did not meet the "m-regular" limitation because the server that connects players' computers or consoles (called a "Park Relay Server") was itself a participant in the network and connected to all other network participants, rather than just m participants. *Id.* at *9. This argument was consistent with Acceleration Bay's expert's explanation that relay servers are participants in the network "because they can equally send and receive heartbeat data, lockstep data,

gameplay data, and VoIP data to other participants in the network." *Id.*

The district court further noted that the asserted claims of the '344 and '966 patents, like those of the '069 patent, include the term, "m-regular," and therefore the accused video games' failure to meet that limitation meant that multiple independent grounds for summary judgment of non-infringement existed with respect to the '344 and '966 patents: failure to meet the "m-regular" limitation and failure to "make," "sell," or "offer to sell" the claimed systems under § 271(a), as discussed above. *Id.* at *7.

Acceleration Bay appealed the district court's grant of summary judgment of non-infringement with respect to the '344, '966, '497, and '069 patents and its construction of the asserted claims of the '069 patent. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

STANDARD OF REVIEW

This Court reviews a district court's grant of summary judgment under the law of the regional circuit, here the Third Circuit. *Teva Pharm. Indus. Ltd. v. AstraZeneca Pharm. LP*, 661 F.3d 1378, 1381 (Fed. Cir. 2011). The Third Circuit reviews a district court's grant of summary judgment de novo. *Azur v. Chase Bank, USA, Nat'l Ass'n*, 601 F.3d 212, 216 (3d Cir. 2010). We review a district court's claim construction based solely on intrinsic evidence de novo and review a district court's subsidiary fact-finding for clear error. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331–32 (2015).

DISCUSSION

The '344 and '966 Patents

Article III of the Constitution limits federal courts' jurisdiction to actual cases and controversies. U.S. Const. art. III, § 2, cl. 1; *Simon v. E. Kentucky Welfare Rts. Org.*, 426 U.S. 26, 37 (1976) ("No principle is more fundamental

to the judiciary's proper role in our system of government than the constitutional limitation of federal-court jurisdiction to actual cases or controversies."). "A case becomes moot—and therefore no longer a 'Case' or 'Controversy' for purposes of Article III—when the issues presented are no longer 'live' or the parties lack a legally cognizable interest in the outcome." *Already, LLC v. Nike, Inc.*, 568 U.S. 85, 91 (2013) (internal quotation marks and citation omitted). It is well established that an appeal should be dismissed as moot when it is impossible to grant the appellant "any effectual relief whatever." *See, e.g.*, *Nasatka v. Delta Sci. Corp.*, 58 F.3d 1578, 1580 (Fed. Cir. 1995) (citation omitted); *Calderon v. Moore*, 518 U.S. 149, 150 (1996) ("It is true, of course, that mootness can arise at any stage of litigation; that federal courts may not give opinions upon moot questions or abstract propositions; and that an appeal should therefore be dismissed as moot when, by virtue of an intervening event, a court of appeals cannot grant any effectual relief whatever in favor of the appellant." (citations omitted)). The test for mootness is whether the relief sought, if granted, would "make a difference to the legal interests of the parties (as distinct from their psyches, which might remain deeply engaged with the merits of the litigation)." *Nasatka*, 58 F.3d at 1580 (citation omitted).

Take Two argues that Acceleration Bay's appeal with respect to the '344 and '966 patents is moot and should therefore be dismissed because Acceleration Bay only challenges one of multiple independent grounds that the district court articulated for granting summary judgment. Appellees' Br. 30. Specifically, according to Take Two, the district court granted summary judgment because (1) the accused video games do not meet the "m-regular" limitation, and (2) Acceleration Bay's theory that Take Two directly infringes because it is the "final assembler" of the claimed networks failed for lack of case law support. *Id.*; *see also Acceleration Bay*, 2020 WL 1333131, at *4, *7. Take Two argues that Acceleration Bay's opening brief only

addresses the second of these summary judgment grounds. As a result, Take Two contends, this court cannot grant Acceleration Bay "effectual relief" even if it agreed with Acceleration Bay's "final assembler" theory because a reversal on that issue would leave the district court's summary judgment grant intact on the separate "m-regular" ground. Appellees' Br. 31–32.

In reply, Acceleration Bay does not dispute that the district court granted judgment on the independent "m-regular" ground. *See* Appellant's Reply Br. 11. Instead, Acceleration Bay argues that this court's reversal on the "final assembler" issue would grant Acceleration Bay effectual relief, and thereby avoid mootness, because it would help Acceleration Bay oppose Take Two's forthcoming "exceptional case motion." *Id.* We are not persuaded. Acceleration Bay has forfeited any challenge to the district court's grant of summary judgment of non-infringement on the basis that the accused products fail to satisfy the "m-regular" limitation of the '344 and '966 patents' asserted claims. *In re Google Tech. Holdings LLC*, 980 F.3d 858, 862 (Fed. Cir. 2020) (defining forfeiture as "the failure to make the timely assertion of a right" (citation omitted)). As a result of Acceleration Bay's forfeiture, its appeal with respect to the '344 and '966 patents is moot because we are unable to grant Acceleration Bay effectual relief. Even if we were to agree that its "final assembler theory" is viable as a matter of law, our reversal on that issue would leave the district court's grant of summary judgment of non-infringement intact. In *Nasatka*, we rejected the appellant's argument that the appeal was not moot because a favorable ruling would impact the parties' positions on the appellee's then-pending motion for attorney fees under 35 U.S.C. § 285. 58 F.3d at 1581. We discern no reason to decide otherwise here. Our advisory validation or rejection of Acceleration Bay's "final assembler" theory is not required for the district court to conduct the exceptional case analysis.

Acceleration Bay also argues that a favorable decision would impact "at least two co-pending cases before the same District Court for all three patents." Appellant's Reply Br. 11–12. Again, we are not persuaded that an impact on other cases between Acceleration Bay and third parties confers jurisdiction. At least two of our sister circuits have observed that "collateral consequences in a separate lawsuit . . . does not fall within any exception to the mootness doctrine . . . ." *Citizens for Responsible Gov't State Pol. Action Comm. v. Davidson*, 236 F.3d 1174, 1184 (10th Cir. 2000) (quoting *State of Neb. v. Cent. Interstate Low-Level Radioactive Waste Compact Comm'n*, 187 F.3d 982, 987 (8th Cir. 1999)). Acceleration Bay cites no case where such consequences were determined to fall within an exception to the mootness doctrine. *See* Appellant's Reply Br. 11–12. We accordingly reject Acceleration Bay's argument with respect to the '344 and '966 patents on the basis of mootness. We therefore lack jurisdiction over this appeal with respect to those patents.

The '069 Patent

Acceleration Bay challenges the district court's grant of summary judgment of non-infringement of the '069 patent by arguing that the asserted claims do not explicitly contain any "m-regular" limitation, and the district court erroneously interpreted the claim term "fully connected portal computer" to include that limitation. Appellant's Br. 32–43.[7]

---

[7] Specifically, Acceleration Bay argues that the district court's construction erroneously imported a "m-regular" limitation from the specification into the claim language "fully connected portal computer," *id.* at 36–38; that it improperly excludes non-m-regular embodiments, *id.* at 38–40; and that it violates the principle of claim

Take Two responds that Acceleration Bay's appeal fails because it does not challenge the district court's full basis for construing the '069 patent's asserted claims to include the "m-regular" limitation. Take Two points out that the district court did not only construe the term "fully connected portal computer" to include the limitation, but it also construed the term "each participant being connected to three or more other participants" to include it. Appellees' Br. 41–42. Because Acceleration Bay does not challenge the district court's latter construction, Take Two argues that the appeal necessarily fails. *Id.* at 41–43. We agree.

Even considering Acceleration Bay's arguments regarding the construction of the term "fully connected portal computer," the district court's grant of summary judgment would remain intact because the district court interpreted a separate term in the '069 patent's asserted claims to include the "m-regular" limitation. *See* J.A. 38–39. We can affirm a district court's summary judgment of non-infringement if the accused infringer "remains entitled to judgment as a matter of law despite an error in claim construction." *Innovad Inc. v. Microsoft Corp.*, 260 F.3d 1326, 1334–36 (Fed. Cir. 2001). We do so again here.

The '497 Patent

Acceleration Bay argues that it has asserted a viable "final assembler" theory of direct infringement based on *Centrak*, and therefore the district court erred in granting summary judgment of non-infringement. Acceleration Bay contends that, even though Take Two does not "make" the hardware that its customers use to play the accused video games, it nevertheless directly infringes by "making" the claimed systems because Take Two qualifies as the "final

---

differentiation because certain claims in the '069 patent do explicitly recite an m-regular limitation, *id.* at 40–43.

assembler" of the "accused systems." Appellant's Br. 30–32. Specifically, Acceleration Bay contends that Take Two's accused software "controls the processors" in the customers' consoles, "caus[ing] the processors to act in a way that satisfies the four means elements recited in claim 9 of the '497 patent." *Id.* at 31.

Acceleration Bay misapprehends *Centrak*. In *Centrak*, the accused infringer made hardware products and installed them by connecting them to an existing network. 915 F.3d at 1371. The plaintiff there had a viable theory—called a "final assembler" theory—that the defendant directly infringed a claim because, even though the defendant did not make some of the existing network components, it "made" the claimed system when it installed its own hardware onto the existing network, thereby completing the claimed system. *Id.*

This case is distinguishable from *Centrak*. Acceleration Bay does not contend that Take Two makes hardware and installs it onto an existing network to complete the claimed system. *See* Appellant's Br. 30–32. Instead, Acceleration Bay proffers a novel theory, without case law support, that the defendants are liable for "making" the claimed hardware components, even though they are in fact made by third parties, because their accused software runs on them. *Id.* at 31–32. We disagree and conclude that *Centillion* controls here, where "[t]he customer, not [Take Two], completes the system by providing the [hardware component] and installing the client software." 631 F.3d at 1288. We therefore hold that the district court did not err in granting summary judgment of non-infringement as to the '497 patent.

CONCLUSION

For the above reasons, we dismiss Acceleration Bay's appeal on mootness grounds insofar as it relates to the '344 and '966 patents, and we affirm the district court's grant of summary judgment that the accused video games do not

infringe the '069 and '497 patents and the district court's construction of the claims at issue of the '069 patent. We have considered Acceleration Bay's remaining arguments but find them unpersuasive.

DISMISSED-IN-PART AND AFFIRMED-IN-PART

COSTS

No costs.